E2J70BD_EN.book Page 1 Friday, June 29, 2007 2:50 PM

TOSHIBA

HDD & DVD VIDEO RECORDER

RD-97DTKB

OWNER'S MANUAL

OPERATIONS GUIDE

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Introduction

Precautions

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The important note is located on the rear of the cabinet.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Laser Safety

This unit employs a laser. Only a qualified service personnel should remove the cover or attempt to service this unit, due to the possibility of eye injury.

CAUTION: USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. DO NOT STARE INTO BEAM.

LOCATION: INSIDE, NEAR THE DECK MECHANISM.

Power Supply

The power supply is connected and the unit is live when the mains cable is plugged into a 220–240 V~, 50 Hz AC outlet. To operate the unit, press **[I/⏻ ON/ STANDBY]**.

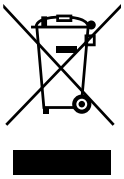
WARNING: LIVE PARTS INSIDE. DO NOT REMOVE ANY SCREWS.

Caution

1. Do not attempt to open the cabinet. There are no parts inside you can service. Refer all servicing to qualified service personnel.
2. Slots and openings in the cabinet at the sides and underneath are provided for ventilation. To ensure reliable operation and to protect the unit from overheating, these openings must not be blocked or covered.
   Avoid installation in enclosed spaces such as bookcases unless suitable ventilation is provided.
3. Keep the unit away from radiators and other heat sources.
4. Avoid use near strong magnetic fields.
5. Do not push objects of any kind into the unit through the cabinet slots or openings as they could touch electrically live parts or short circuit parts resulting in a fire or electric shock.
6. Do not spill liquid on the unit. If liquid is spilled and enters the unit, consult qualified service personnel.
7. Do not stand the unit vertically. Use the unit in a horizontal (flat) position only.
8. Before attempting to operate the unit, make sure that the timer recording mode is off.
9. This product is in Stand-by mode when turned off while the mains cable is connected.
10. Do not place any combustible objects on the device (candles, etc.).
11. Before moving the unit, be sure to remove any discs and unplug the mains cable from the AC outlet.
12. Disconnect the mains plug to shut off when find troubles or not in use.
13. The mains plug shall remain readily operable.
14. Read both manual instructions to ensure correct and safe installation and interconnection of the unit in multimedia systems.
15. Keep the distances 20 cm around apparatus of ventilation openings.

A NOTE ABOUT RECYCLING
This product's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with your local recycling regulations.

This product consists of materials which can be recycled and reused if disassembled by a specialised company.
Batteries should never be thrown away or incinerated but disposed of in accordance with your local regulations concerning chemical wastes.



Make your contribution to the environment!!!
- Exhausted batteries do not belong in the dustbin.
- You can dispose of them at a collection point for exhausted batteries or special waste.
- Contact your council for details.

For Customer Use:
Carefully read the Model No. and Serial No. located at the back of the unit and enter the information below. Retain this information for future reference.
Model No. _____
Serial No. _____

Connection to Power

Before Switching on make sure that the voltage of your electricity supply is the same as that indicated on the rating plate.

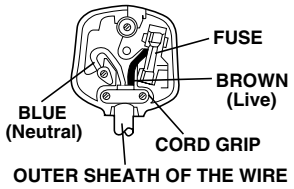
Mains Cord
This appliance may be fitted with a non-rewireable plug. If it is necessary to change the fuse in a nonrewireable plug the fuse cover must be refitted. If the fuse cover is lost or damaged, the plug must not be used until a replacement available from the appliance manufacturer is obtained.
It is important that the colour of the replacement fuse cover corresponds with the rating marking on the base of the plug.
If the plug has to be changed because it is not suitable for your socket, or becomes damaged, it should be cut off and an appropriate plug fitted following the wiring instructions below. The plug removed must be disposed of safely as insertion into a 13A socket is likely to cause an electrical hazard.
For your own safety read the following instructions carefully before attempting to connect this unit to mains.
The wires in this mains lead are coloured in accordance with the following code:

BLUE=NEUTRAL, BROWN=LIVE

Important
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
No connection is to be made to the earth terminal of the plug.
If a 13 Amp (BS 1363) Plug is used, a 5 Amp Fuse must be fitted, or if any other type of Plug is used a 3 or 5 Amp Fuse must be fitted, either in the Plug or Adaptor, or on the Distribution Board.

Mains Supply: 220 - 240V ~ 50 Hz - AC only

Do not make any connection to the larger pin marked with the letter "E" or by the symbol ⏚ or coloured green or green and yellow.



Installation Location

For safety and optimum performance of this unit:
- Install the unit in a horizontal and stable position.
- Do not place anything directly on top of the unit.
- Do not place the unit directly on top of the TV.
- Shield the unit from direct sunlight and keep away from sources of intense heat. Avoid dusty or humid locations. Avoid locations with insufficient ventilation for suitable heat dissipation. Do not block the ventilation holes on the sides of the unit. Avoid locations subject to strong vibration or strong magnetic fields.

Avoid the Hazards of Electrical Shock and Fire

- Do not handle the mains cable with wet hands.
- Do not pull on the mains cable to disconnect it from AC outlet. Grasp it by the plug.
- If, by accident, water is spilled on the unit, unplug the mains cable immediately and take the unit to an authorised service centre for servicing.

Moisture Condensation Warning

Moisture condensation may occur inside the unit when it is moved from a cold place to a warm place, after heating a cold room, or under conditions of high humidity. Do not use the unit for at least 2 hours to allow the inside to dry.

About Copyright

Unauthorised copying, broadcasting, public performance and lending of discs are prohibited.
This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorised by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision. Reverse engineering or disassembly is prohibited.

Notice for the Progressive Scan Outputs

Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of picture problems with 480 or 576 progressive scan output, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding your TV set compatibility with this 480p or 576p product, please contact our customer service centre.

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

"Dolby® Digital Stereo Creator enables consumers to create stereo DVD-Videos with stunning Dolby Digital sound tracks at home. The technology, when utilised instead of PCM recording, also saves recordable disc space, allowing for higher video resolution or extended recording time on each DVD. DVDs mastered using Dolby Digital Stereo Creator will play back on all DVD-Video players."
Note: This is true when the players are compatible with actual recordable DVD discs.

"DTS" and "DTS Digital Out" are registered trademarks of DTS, Inc.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.

The DVB logo is a registered trademark of the DVB Digital Video Broadcasting Project.

EU Conformity Statement

"This product is marked with "CE" and complies therefore with the applicable harmonized European standards listed under the Low Voltage Directive **2006/95/EC** and the EMC Directive **2004/108/EC**."

Responsible for CE-marking is
TOSHIBA INFORMATION SYSTEMS (U.K.) LTD,
Toshiba Court, Weybridge Business Park,
Addlestone Road, Weybridge,
Surrey, KT15 2UL, United Kingdom

Maintenance

CLEANING THE UNIT
Use a soft cloth slightly moistened with a mild detergent solution. Do not use solutions containing alcohol, spirits, ammonia or abrasive.

CLEANING DISCS
If a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the centre out. Do not wipe in a circular motion.
Do not use solvents such as benzine, thinner, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analogue records.

DISC HANDLING
Handle the discs so that fingerprints and dust do not adhere to the disc surfaces.
Always store the disc in its protective case when it is not in use.

HDD HANDLING
- HDD is a precision apparatus that is susceptible to vibration, strong impact or dirt. Depending on the installation environment or handling, the unit may become partially damaged or in the worst case, recording or replaying may not be available. Especially while the HDD is in motion, do not subject it to vibration or strong impact or pull out the power plug. And if a power failure occurs, the content of the recording / replaying program may be lost.
- HDD rotates at high speed when in operation. Be sure that rotation has stopped and then move the unit without subjecting it to strong impact or vibration.

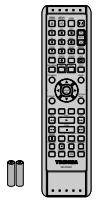
SERVICING
If the unit becomes inoperative, do not try to correct the problem by yourself. There are no user serviceable parts inside. Turn the unit off, unplug the mains cable, and consult your dealer or an authorised service centre.

CLEANING THE DISC LENS

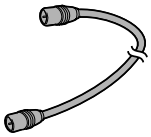
If the unit does not perform correctly even though you have referred to “Troubleshooting” and the relevant sections in the Owner’s Manual, the laser optical pickup unit may be dirty. Consult your dealer or an authorised service centre for inspection and cleaning of the laser optical pickup unit.

Accessories Supplied

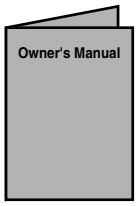
- Remote control with two R6 (AA) batteries



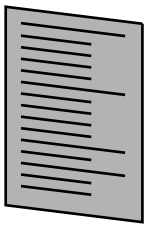
- RF cable



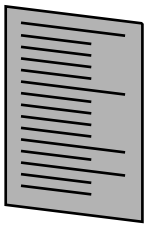
- Owner’s Manual



- Quick Setup Guide



- Registration card



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Features

This unit not only plays back the contents on internal HDD, DVD, or CD, but also offers features for you to record on HDD or DVD and edit them after that. The following features are offered with this unit.

Recording

This unit allows you to record on the HDD, a DVD-RW/+RW (rewritable) and a DVD-R/+R (one-time write). You can choose any one for your convenience.

HDD DVD

Recording up to 36 programmes:
You can programme the unit to record up to 36 programmes, up to a month in advance. Daily or weekly programme recordings are also possible.

One-touch Timer Recording:
[➥ Page 40]
You can set your required recording time easily. Every time **[REC ●]** is pressed during recording, the recording time will be increased by 30 minutes up to 8 hours. It will be turned off automatically when the recording time you set is finished.

Left channel stereo recording:
This unit can record the sound of the Left channel monaural input as Left and Right channels automatically (available only for AV3 jacks on the front panel).

Automatic Chapter marker setting:
[➥ Page 36]
Chapter markers will be added to recordings as you set them in the Setup menu before starting to record.

Automatic Playlist making:
The unit creates a Playlist automatically after recording.

HDD

250 GB hard disc:
This unit is equipped with a 250GB hard disc which allows you to record up to 424 hours (with SLP mode).

PDC: [➥ Page 42]
This system assures that the TV programme you wish to record using timer recording will be recorded exactly from beginning to end even if the actual broadcasting time differs. This feature is only available for analogue channels.

DVD

Alternate recording: [➥ Page 41]
If there is no recordable disc in the unit, if the disc does not have enough space to complete the recording, or if the material is “copy-once” programme and prohibited to be recorded on a DVD in the unit, the unit will detect it and automatically record to the HDD even when DVD is selected as the recording media. This feature is available only for timer recording. Not available for one-touch timer recording.

Automatic finalising : [➥ Page 54]
You can finalise discs automatically at the end of the disc space if you set this in the Setup menu.

Automatic Title menu making:
The unit creates Title menus automatically when finalising discs.

Dubbing

With this unit, you can enjoy bi-directional dubbing between HDD and DVD.

HDD DVD

High speed dubbing:
[➥ Page 50]
This feature offers you the dubbing speed of 32 times the SLP mode dubbing at the maximum.

Auto recording mode dubbing:
[➥ Page 50]
When dubbing, if you set the recording mode to “Auto”, the recording mode will automatically be adjusted so the titles will fit nicely in the remaining space of the disc.

DV dubbing: [➥ Pages 48 - 49]
This function helps you to easily dub the contents of the DVC (digital video camcorder) to HDD/DVD.

Playback

HDD DVD

Theatre surround sound: [➥ Page 23]
When the unit is connected to an amplifier or a decoder compatible with Dolby Digital or DTS, you can enjoy theatre-quality surround sound from discs recorded with the surround sound system.

Quick search: [➥ Pages 65 - 66]
You can easily find the part you want to watch using the search function. Search for a desired point on a disc by title, chapter / track or time.

Variable skip: [➥ Page 62]
You can skip forward a certain time, which is specified in “Playback” menu in advance, with one-touch while playback.

Variable replay: [➥ Page 62]
You can skip back a certain time, which is specified in “Playback” menu in advance, with one-touch while playback.

Playback from Original or a Playlist:
You can play back titles using either the Original list or a Playlist.

Virtual Surround System: [➥ Page 68]
You can enjoy stereophonic space through your existing 2 channel stereo system.

HDD

Chasing Playback during Recording and Simultaneous Playback and Recording:
[➥ Page 64]
You can play the already recorded part of the current recording or another title during recording.

Pausing a TV broadcast to resume later (Pause TV): [➥ Page 64]
With **[TIME SLIP]** button, you can virtually pause and resume the live TV broadcast.

DVD

Playing back on MP3 / JPEG / DivX® files:
[➥ Pages 56 - 59]
You can enjoy MP3 / JPEG / DivX® files which are recorded on CD-RW/-R.
DivX® files can also be recorded on DVD-RW/-R and DVD+RW/+R discs.

Editing

HDD DVD

Set / clear chapter markers [➥ Page 74]
You can easily add chapter markers at every selected time interval in your recordings for easy editing.

Adding or Deleting Chapter Marks Manually [➥ Page 73]
You can add or delete chapter marks.

Creating Titles to a Playlist [➥ Page 76]
You can create a title to the Playlist.

Deleting Titles [➥ Page 71]
You can delete titles which you do not need anymore.

Deleting a Scene of a Title [➥ Page 77]
You can delete a specific scene of a title.

Editing title name [➥ Page 72]
You can name titles or change the title name.

Combining Titles [➥ Page 76]
You can combine two titles into a single title.

Dividing Titles [➥ Pages 75 - 76]
You can divide a title into two new titles.

Protecting titles: [➥ Page 75]
To avoid accidental editing or erasing of titles, the protect function is useful when set to “ON” in the Original list.

DVD

Hiding chapters: [➥ Pages 74 - 75]
To keep others from playing back some chapters without permission, you can hide chapters.

Compatibility

Playing back discs recorded in Video mode on any regular DVD player: [➥ Pages 53 - 54]
Discs recorded in Video mode can be played back on regular DVD players, including computer DVD drives compatible with DVD-Video playback. You will need to finalise the discs recorded in Video mode to play back in other DVD players.
Although DVD+RW / R discs are playable on other units without finalisation in most cases, it is recommended to finalise in order to stabilise the performance.

* DVD-Video Format (Video mode) is a new format for recording on DVD-RW/-R discs that was approved by the DVD Forum in 2000. Adoption of this format is optional for manufactures of DVD playback devices and there are DVD-Video players, DVD-ROM drives and other DVD playback devices available that cannot play back DVD-RW/-R discs recorded in the DVD-Video Format.

Others

HDD DVD

Progressive scan system: [➥ Pages 21, 85]
Unlike conventional interlace scanning, the progressive scan system provides less flickering and images in higher resolution than that of traditional television signals.

HDMI [➥ Pages 21, 86]
(High-Definition Multimedia Interface)
You can enjoy clearer audio/video output when connecting this unit to a display device with an HDMI-compatible port.

Guide to the Owner’s Manual

Symbols Used in the Owner’s Manual

To show what recording mode or disc type applies to each function, the following symbols appear at the beginning of each operating item.

Symbol	Description
HDD	Available to (internal) HDD
DVD-V	Available to DVD-Videos
Video DVD-RW	Available to DVD-RW discs in Video mode
VR DVD-RW	Available to DVD-RW discs in VR mode
DVD-R	Available to DVD-R discs in Video mode
DVD+RW	Available to DVD+RW discs
DVD+R	Available to DVD+R discs
CD	Available to Audio CDs
VCD	Available to Video CDs
MP3	Available to CD-RW/-R discs with MP3 files
JPEG	Available to CD-RW/-R discs with JPEG files
DivX®	Available to DVD-RW/-R, DVD+RW/+R and CD-RW/-R discs with DivX® files

Symbols for Tuner Setting

The following is the description for the symbols for tuner setting used in this manual.

ANALOG : Settings only for the Analogue mode

DVB : Settings only for the DVB mode

		Medias for Recording / Playing						
Disc Type		DVD-RW		DVD-R	DVD+RW	DVD+R	HDD	
Logo								
Format		Can be formatted in VR or Video mode		Automatically formatted in Video mode	Automatically formatted in +VR mode	Automatically formatted in +VR mode	–	
		Video Mode	VR Mode					
Icon								
Maximum Record Time		480 min (12 cm) 144 min (8 cm)	480 min (12 cm) 144 min (8 cm)	480 min (12 cm) 144 min (8 cm)	480 min (12 cm) 144 min (8 cm)	480 min (12 cm) 144 min (8 cm)	424 hrs (with SLP mode)	
Recordable/Playable Versions		Ver. 1.1, 1.2 Ver. 1.1/2× CPRM compatible Ver. 1.2/4× CPRM compatible		Ver. 2.0 Ver. 2.0/4× Ver. 2.0/8× Ver. 2.0/16×	1×-4×	1×-16×	–	
Compatibility		Playable on most DVD players. Finalisation necessary. (Title menu will be created)	Playable only on VR mode compatible unit. Finalisation recommended.	Playable on most DVD players. Finalisation necessary. (Title menu will be created)	Playable on DVD+RW compatible players. Finalisation recommended. (Title menu will be created)	Playable on most DVD players. Finalisation recommended. (Title menu will be created)	–	
Available Features	Recording Features							
	Record TV Programmes	✔	✔	✔	✔	✔	✔	
	Reuse by deleting the current contents	✔	✔		✔		✔	
	Record 16:9 size pictures	✔	✔	✔			✔	
	Record copy-once programmes		✔*				✔	
	Create chapters at fixed intervals (auto chapter)	✔	✔	✔	✔	✔	✔	
	Editing Features		Playlist	Original			Playlist	Original
	Scene Delete		✔	✔			✔	✔
	Edit Title Name	✔	✔	✔	✔	✔	✔	✔
	Create chapters wherever you like (chapter mark)		✔	✔		✔	✔	✔
	Divide a title		✔			✔	✔	✔
	Combine titles		✔				✔	
	Hide chapters					✔	✔	
	Delete a title	✔	✔	✔	✔	✔	✔	✔	✔
	Deleting Selected titles						✔	✔
	Create a playlist			✔				✔
	Protect a title			✔				✔

✔: Available Gray: Not available
* CPRM compatible disc only.

Because of problems and errors that can occur during the creation of DVD and CD software and/or the manufacture of DVD and CD discs, Toshiba cannot guarantee that product will play every feature of every DVD bearing the DVD logo and/or every CD bearing the CD logo. As one of the creators of DVD technology, Toshiba DVD players are manufactured using the highest standards of quality, and as a result, such incompatibilities are rare.

DVD players with RW COMPATIBLE are capable of playing DVD-RW recorded in VR mode.

	Discs for Playing				
Disc Type	DVD-VIDEO	CD-DA	Video CD	CD-RW	CD-R
Logo					
Icon					

	Files for Playing		
Type of title	MP3	JPEG	DivX®
Icon			
Media	CD-RW/-R	CD-RW/-R	CD-RW/-R DVD-RW/-R DVD+RW/+R

is a trademark of DVD Format/Logo Licensing Corporation.

- Official DivX® Certified product; Plays DivX® 6.0, DivX® 5, DivX® 4, DivX® 3, and DivX® VOD video content (in compliance with DivX Certified™ technical requirements).
- Discs containing the DivX® files with the DivX® GMC (Global Motion Compensation) playback feature, which is DivX® supplemental function, cannot be played back on this unit.

Unplayable Discs

The following discs will not play back on this unit.

- CD-ROM
- Compact Disc-Interactive (CD-I)
- Video Single Disc (VSD)
- DVD-ROM
- DVD-audio
- Unfinalised disc
- DVD contains MP3, Windows Media™ Audio or JPEG files

On the following disc, the sound may not be heard.

- Super audio CD - Only the sound on the CD layer can be heard. The sound on the high-density super audio CD layer cannot be heard.

Colour Systems

DVDs are recorded using different colour systems throughout the world. The most common colour system, used primarily in the U.K. and other EU countries, is PAL.
This unit uses the PAL system. However, it is also possible to play back DVDs using other colour systems, such as NTSC.

Region Codes

This unit has been designed to play DVD with region 2. DVD must be labelled for ALL regions or for region 2 in order to play on the unit. You cannot play back DVD that are labelled for other regions. Look for the symbols on the right on your DVD. If these region symbols do not appear on your DVD, you cannot play back the DVD in this unit.
The number inside the globe refers to region of the world.
A DVD labelled for a specific region can only play back on the unit with the same region code.

Following discs are recommended for good recording quality and are proven to be compatible with this unit. However, depending on the media condition the unit may not read the disc properly.

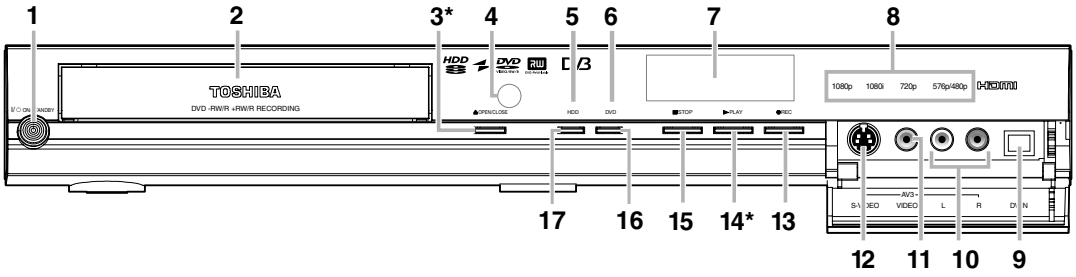
Verbatim	DVD+R 8x, DVD+RW 4x, DVD-R 8x, DVD-RW 2x
JVC	DVD-RW 4x
Maxell	DVD+R 4x/8x/16x, DVD-R 8x/16x
SONY	DVD+R 4x/8x/16x, DVD+RW 4x
TDK	DVD+R 4x/8x/16x

Performance of any other discs are not guaranteed.

- Toshiba is not liable for any damage or loss caused directly or indirectly by the malfunction of this recorder, including, without limitation, any one of the following:
  - Failure to record contents intended to be recorded by the consumer.
  - Failure to edit contents as intended by the consumer.
  - When a DVD-RW/-R, DVD+RW/+R disc created on this recorder is used (e.g., insertion, playback, recording or editing) in another DVD player, recorder or personal computer drive.
  - When a DVD-RW/-R, DVD+RW/+R disc that is used in the manner described in the immediately preceding bullet point is used again in this recorder.
  - When a DVD-RW/-R, DVD+RW/+R disc that was recorded in another DVD recorder, or in a personal computer drive is used in this recorder.
- Some functions may not work with personal computer discs.
- Discs recorded in this recorder may not operate as expected on other DVD players, recorders or personal computer drives.

Functional Overview

Front Panel



(✱)The unit can also be turned on by pressing these buttons.

1 I/⏻ ON/STANDBY button
- Press to turn the unit on and off.

2 Disc tray
- Place a disc when the disc tray is opened.

3 ⏏ OPEN/CLOSE button*
- Press to open or close the disc tray.

4 Infrared sensor window
- Receive signals from your remote control so that you can control the unit from a distance.

5 HDD mode indicator
- Lights up in blue when the unit is in HDD mode.

6 DVD mode indicator
- Lights up in green when the unit is in DVD mode.

7 Display
- Refer to "Front Panel Display Guide" on page 19.

8 HDMI indicator
- Lights up and indicates the HDMI output mode when HDMI output is on.

9 DV IN jack (AV4)
- Use to connect the DV output of external device with a DV cable.

10 AUDIO input jacks (AV3)
- Use to connect external device with an RCA audio cable.

11 VIDEO input jack (AV3)
- Use to connect external device with an RCA video cable.

12 S-VIDEO input jack (AV3)
- Use to connect the S-video output of external device with an S-video cable.

13 ● REC button
- Press once to start a recording. Press repeatedly to start one-touch timer recording.

14 ▶ PLAY button*
- Press to start or resume playback.

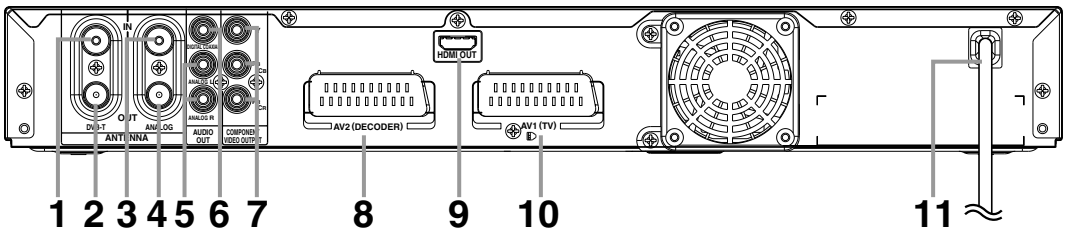
15 ■ STOP button
- Press to stop playback or recording.
- Press to stop timer recording.

16 DVD button
- Press to select the DVD output mode.

17 HDD button
- Press to select the HDD output mode.

Button names described in the Owner's Manual
The instructions in this manual are described mainly with the operations using the remote control. Some operations can be carried out using the buttons on the front panel.

Rear Panel



1 ANTENNA IN (DVB-T)
- Connect to an antenna or cable to receive DVB-T signal.

2 ANTENNA OUT (DVB-T)
- Connect to the Aerial jack on your TV, cable box or direct broadcast system to output the signal received at ANTENNA IN (DVB-T). Use the supplied RF cable.

3 ANTENNA IN (ANALOG)
- Connect to an antenna or cable to receive analogue signal.

4 ANTENNA OUT (ANALOG)
- Connect to the Aerial jack on your TV, cable box or direct broadcast system to output the signal received at ANTENNA IN (ANALOG). Use the supplied RF cable.

5 AUDIO OUT (ANALOG L/R) jacks
- Connect to the audio input jacks on your TV. Use a commercially available Audio cable.

6 AUDIO OUT (DIGITAL COAXIAL) jack
- Connect to an amplifier with a digital input jack such as a Dolby Digital decoder, DTS decoder or MPEG decoder. Use a commercially available Coaxial cable.

7 COMPONENT VIDEO OUTPUT jacks
- Connect to the component video input jacks on your TV. Use a commercially available Component Video cable.

8 AV2 (DECODER) socket
- Connect to VCR, camcorder, or other Audio-Video equipment. Use a commercially available Scart cable.

9 HDMI OUT jack
- Connect to a display with an HDMI compatible port. Use a commercially available HDMI cable.

10 AV1 (TV) socket
- Connect to the Scart socket on your TV. Use a commercially available Scart cable.

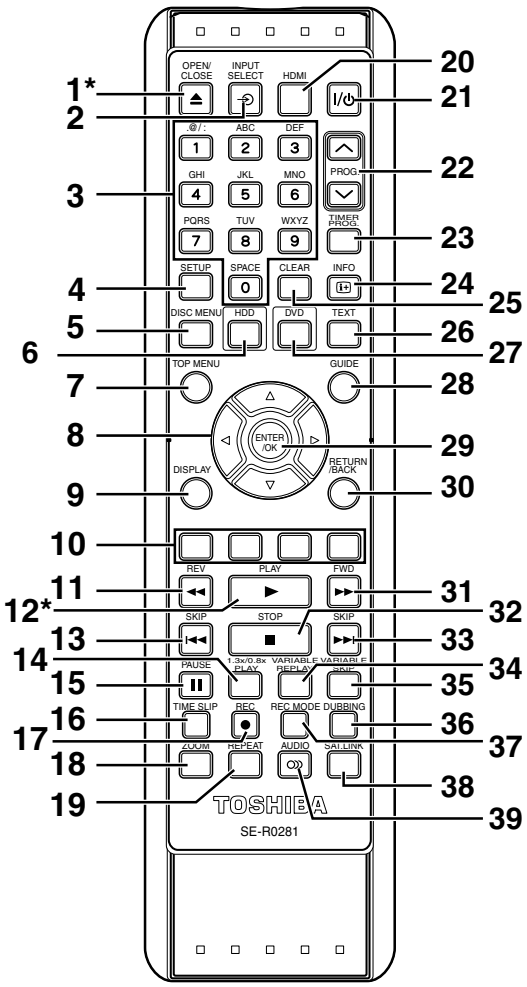
11 Mains cable
- Connect to a standard AC outlet.

Note

- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

• This unit does not have an RF modulator.

Remote Control



(*) The unit can also be turned on by pressing these buttons.

1 OPEN/CLOSE ⏏ button*
- Press to open or close the disc tray.

2 INPUT SELECT button
- Press to select the DVB, analogue mode or appropriate input.

3 Number buttons
- Press to select channel numbers.
- Press to select a title / chapter / track on the display.
- Press to enter values for settings in the Setup menu.
- Press to enter the characters in edit function.

4 SETUP button
- Press to display the Setup menu in stop mode.

5 DISC MENU button
- Press to display the Disc menu during playback.
- Press to change the Original and Playlist on the TV screen.

6 HDD button
- Press to select the HDD output mode.

7 TOP MENU button
- Press to display the Title list.

8 Direction ▲ / ▼ / ◀ / ▶ buttons
- Press to move the cursor and determine items or settings.

9 DISPLAY button
- Press to display the On-Screen Display.

10 RED/GREEN/YELLOW/BLUE button
- Press to follow the DVB instruction displayed on-screen.

11 REV ◀◀ button
- During playback, press to fast reverse.
- When playback is paused, press to reverse slowly.

12 PLAY ▶ button*
- Press to start or resume playback.

13 SKIP ⏮ button
- During playback, press twice in quick successions to skip to the previous chapter or track.
- When playback is paused, press to play reverse step by step.

14 1.3x/0.8x PLAY button
- During playback, press to playback in a slightly faster/slower speed while keeping the audio quality just as normal playback.

15 PAUSE ❚❚ button
- Press to pause playback or recording.

16 TIME SLIP button (HDD)
- Press to virtually pause and resume the live TV broadcast.

17 REC ● button
- Press once to start a recording.
- Press repeatedly to start a One-touch Timer Recording.

18 ZOOM button
- During playback, press to enlarge the picture on the screen.

19 REPEAT button
- Press to select the repeat mode.

20 HDMI button
- Press to set the HDMI connector's video signal output mode.

21 I/⏻ ON/STANDBY button
- Press to turn on or off the unit.

22 PROG. ∧ / ∨ buttons
- Press to change the channel up or down.

23 TIMER PROG. button
- Press to display the timer programme setting menu.

24 INFO button
- Press to display the DVB programme information.

25 CLEAR button
- Press to clear the password once entered.
- Press to cancel the programming for a disc.
- Press to clear the selecting marker number in the marker setup mode.
- Press to clear the programme once entered in the timer recording setting mode.

26 TEXT button
- Press to switch Teletext on or off.

27 DVD button
- Press to select the DVD output mode.

28 GUIDE button
- Press to call up the EPG list in DVB mode.

29 ENTER/OK button
- Press to acknowledge or approve a menu selection.

30 RETURN/BACK button
- Press to return to the previously displayed menu screen.

31 FWD ▶▶ button
- During playback, press to fast forward.
- When playback is paused, press to forward slowly.

32 STOP ■ button
- Press to stop playing back or recording.

33 SKIP ▶▶| button
- During playback, press to skip to the next chapter or track.
- When playback is paused, press to advance step by step.

34 VARIABLE REPLAY button
- Replays by the amount of time set in advance.

35 VARIABLE SKIP button
- Skips by the amount of time set in advance.

36 DUBBING button
- During playback, press to start dubbing right away.
- In stop mode, press to display “Dubbing” menu.

37 REC MODE button
- Press to switch the recording mode.

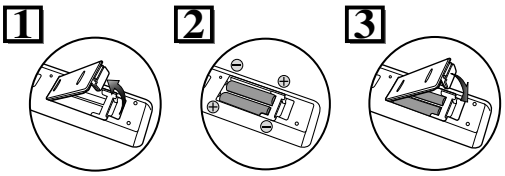
38 SAT.LINK button
- Press to activate the Satellite Link Timer Recording.

39 AUDIO ◌)) button
- For analogue channels when receiving a bilingual broadcast, press to change the audio out setting to “Main”, “Sub” or “Main/Sub”.
- Press to change the bilingual audio source of an external equipment to “Main”, “Sub” or “Main/Sub”. (Available only when the “External Input Audio” in the Setup menu is set to “Bilingual” in advance.)
- Press to display the audio menu during playback.
- Press to select the sound mode for DVB channels.

Button names described in the Owner’s Manual
The instructions in this manual are described mainly with the operations using the remote control. Some operations can be carried out using the buttons on the front panel.

Installing Batteries in the Remote Control

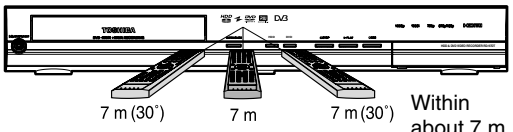
Install two R6 (AA) batteries (supplied) into the remote control, carefully match with the polarity indicated inside the battery compartment.



Caution
- Incorrect use of batteries can result in hazards such as leakage and bursting.
- Do not mix new and old batteries together.
- Do not use different kinds of batteries together.
- Make sure that the plus (+) and minus (–) ends of each battery match the indications inside the battery compartment.
- Remove batteries if the equipment will not be used for a month or more.
- When disposing used batteries, please comply with governmental regulations or the public instructions for environmental protection that apply in your country or area.
- Do not recharge, short-circuit, heat, burn or disassemble batteries.

About the Remote Control

- Make sure there is no obstacle between the remote control and the remote control sensor on the unit.
- Use within the operating range and angle as shown.



Remote control

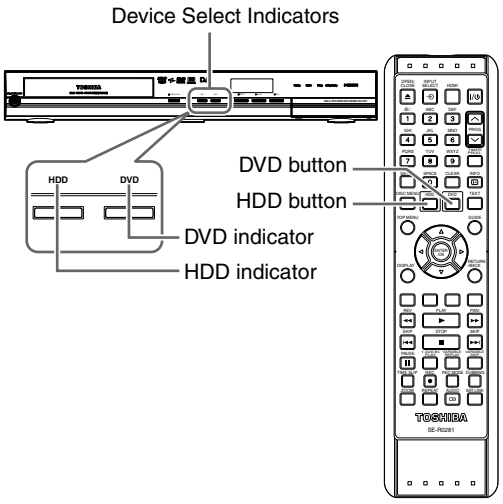
- The maximum operable range as follows:

Line of sight: approximately 7 m
Either side of centre: approximately 7 m within 30 degrees

- Remote control operation may become unreliable if the remote control sensor of the unit is being exposed by the strong sunlight or fluorescent light.
- Remote controls for different devices can interfere with each other. Be careful when using remote controls for other equipment located close to the unit.
- Replace the batteries when the operating range of the remote control reduces.

Switching HDD / DVD mode

Because this unit is a combination of a HDD and a DVD recorder, you must select which component you wish to operate first.



HDD mode

HDD mode

Press **[HDD]** on the remote control or front panel. (Verify that the HDD indicator is lit in blue.)

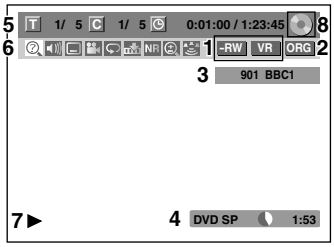
DVD mode

Press **[DVD]** on the remote control or front panel. (Verify that the DVD indicator is lit in green.)

Guide to On-Screen Displays

DISPLAY Menu

With a disc inserted into the unit, press **[DISPLAY]** to display the On-Screen Display. The menu shows information about what is recorded on the disc.



This is an example screen for explanation. Displayed items vary depending on the actual mode.

1 Indicates a disc type and format mode. (DVD mode only)

2 Indicates a type of titles for HDD and VR mode DVD-RW disc.

3 Indicates a channel number, station name (analogue channel only) or selected external input mode.

4 Indicates a media, recording mode and possible recording time left.

5 Indicates the current title number/total number of titles, the current chapter number/total number of chapters, and time lapse of the current title playback/ total duration of the title.

6 Each icon means:

- : Search
- : Audio
- : Subtitle
- : Angle
- : Repeat
- : Marker
- NR : Noise Reduction
- : Zoom
- : Surround

7 Indicates an operation status.

8 Indicates the component in use.

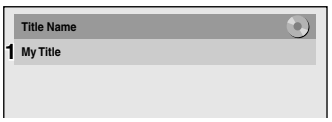
- : HDD
- : DVD

Note

- For some descriptions on this manual, only one disc type is indicated as an example.

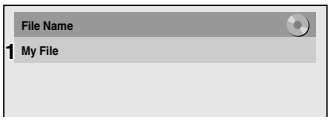
Press **[DISPLAY]** while the On-Screen Display is displayed to display Title Name Information, File Name Information or HDMI Information.

<Title Name Information>



(only when DVD+RW/+R, VR mode DVD-RW/-R, unfinalised Video mode DVD-RW/-R disc or HDD is in playback)

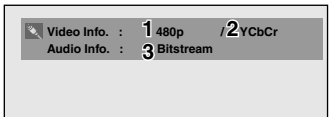
<File Name Information>



(only when a CD with MP3/JPEG/DivX® files is in playback)

1 Displays title/file name.

<HDMI Information>



(only for the images output through the HDMI output)

1 Indicates the resolution of the HDMI output image.

2 Indicates the HDMI video format.

3 Indicates the HDMI audio format.

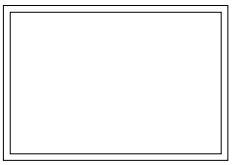
• "- - -" will be displayed, when it does not have any information.

INFO Menu

DVB

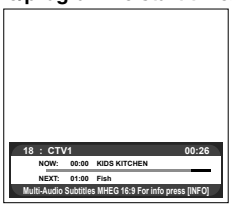
Press **[INFO i+]** while you are viewing DVB channels to display the programme information.

<OFF>



Press [INFO i+]

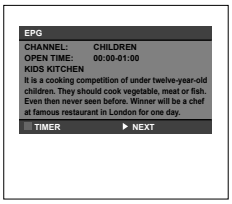
<CHANNEL NUMBER and NAME/ Current and Next programme name/programme start time>



After 3 seconds, the window will be back to the previous screen.

Press [INFO i+]

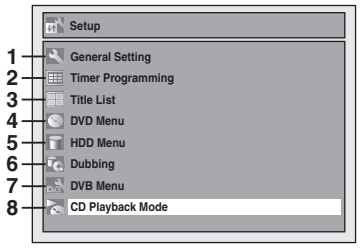
<EPG Programme Detail menu>


EPG
CHANNEL: CHILDREN
OPEN TIME: 00:00-01:00
KIDS KITCHEN
It is a cooking competition of under twelve-year-old children. They should cook vegetable, meat or fish. Even then never seen before. Winner will be a chef at famous restaurant in London for one day.
TIMER
NEXT

Press [INFO i+], [RETURN/BACK] or [SETUP]

Main Menu

Press **[SETUP]** to display the main menu. Then use **[▲ / ▼]** to select a menu and press **[ENTER/OK]** to display the sub menu. These menus provide entries to all main functions of the unit.



1 General Setting:
To go to General Setting menu.

2 Timer Programming:
To programme a timer recording.

3 Title List:
To call up the title list.

4 DVD Menu:
To set up the DVD disc setting.

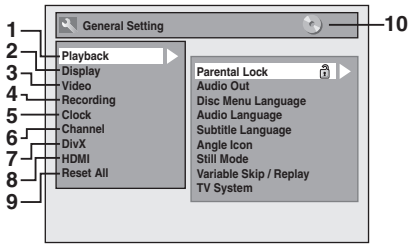
5 HDD Menu:
To set up the HDD setting.

6 Dubbing:
- To dub the content of the HDD to DVD or vice versa.
- "Dubbing" is available only when a recordable disc is loaded.

7 DVB Menu:
To set up the DVB setting.

8 CD Playback Mode:
To set up the CD playback setting.
- "CD Playback Mode" is available only when an audio CD, a video CD, a CD-RW/-R with MP3 / JPEG files is inserted into the unit.

General Setting Menu



1 Playback:
To set up the unit to play discs as you prefer.

2 Display:
To set up the OSD screen as you prefer.

3 Video:
To set up the video setting.

4 Recording:
To set up the unit to record to discs as you prefer.

5 Clock:
To set up the clock of the unit as you need.

6 Channel:
To adjust the channel setting of the unit as you prefer.

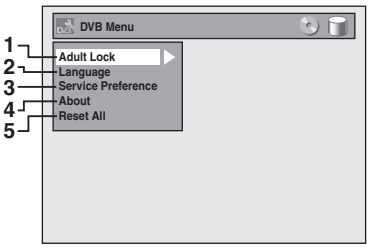
7 DivX:
To set up the setting for the DivX® playback.

8 HDMI:
To set up the HDMI connection setting.

9 Reset All:
To reset the setting to the factory default.

10 : HDD
: DVD
Indicates the available mode for the selected function.

DVB Menu



1 Adult Lock:
To set up the Pincode for Adult Lock.

2 Language:
To set up the Language for audio, subtitle and digital Teletext for DVB.

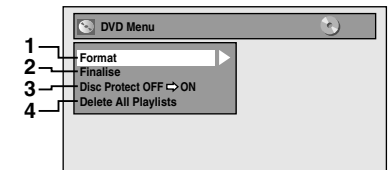
3 Service Preference:
To set whether you receive the Teletext or Subtitle information from the DVB.

4 About:
To check the current DVB system software version of this unit.

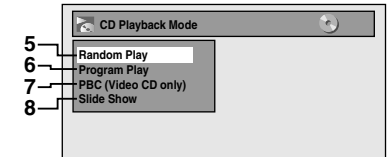
5 Reset All:
To reset the DVB Menu setting to default.

DVD Menu / HDD Menu / Dubbing / CD Playback Mode

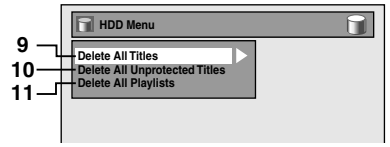
<DVD Menu menu>



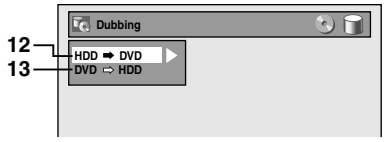
<CD Playback Mode menu>



<HDD Menu menu>



<Dubbing menu>



1 Format (DVD-RW, DVD+RW only):
Allows you to format the disc.

2 Finalise:
Allows you to finalise a disc containing recorded titles.

3 Disc Protect (VR mode DVD-RW, DVD+RW/+R disc only):
Allows you to protect a disc from accidental editing or recording.

4 Delete All Playlists (VR mode DVD-RW disc only):
Allows you to delete all Playlists.

5 Random Play:
Allows you to activate the random playback feature.

6 Program Play (audio CD/video CD only):
Allows you to activate the programme playback feature.

7 PBC (Video CD only):
Allows you to select images or information on the menu screen by activating PBC (playback control) function.

8 Slide Show (JPEG files only):
Allows you to select the display time of the slide show mode.

9 Delete All Titles:
Allows you to delete all titles, including the protected titles in the HDD title list.

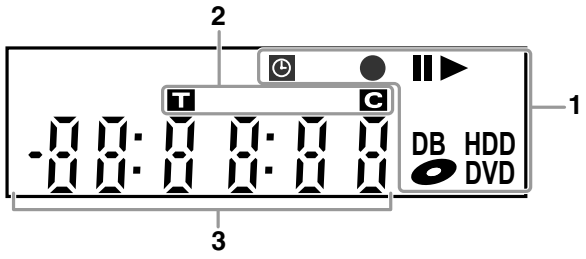
10 Delete All Unprotected Titles:
Allows you to delete all unprotected titles in the HDD title list.

11 Delete All Playlists:
Allows you to delete all Playlists for HDD.

12 HDD ➡ DVD:
Allows you to dub from HDD to DVD.

13 DVD ➡ HDD:
Allows you to dub from DVD to HDD.

Front Panel Display Guide



1 Current status of the unit

- **II:** Appears when disc playback is paused. Appears also during step by step playback.
- **►:** Appears when playing back a disc.
- **II►:** Appears during slow forward / reverse playback.
- **◷ :** Appears when the timer programming or One-touch Timer Recording (OTR) is set and is operating. Appears when the unit goes into the Satellite Link standby mode. Flashes when there is an error in programming.
- **●:** Appears when recording. Flashes when recording being paused.
- **: Appears when a disc is in this unit.
- **DB:** Appears during dubbing.
- **HDD:** Appears when the unit is in HDD mode.
- **DVD:** Appears when the unit is in DVD mode.

2 Title / Track and Chapter number

- **T :** Title / track number
- **C :** Chapter number

3 Displays the following

- Playing back time
- Current title / chapter / track number
- Recording time / remaining time
- Clock
- Channel number
- One-touch Timer Recording (OTR) remaining time
- Selected HDMI OUTPUT mode

Display Messages

OPEN	The disc tray is opening.
PBC DVD	The PBC function of the Video CD is activated.
CLOSE	The disc tray is closing.
Load	A disc is loading.
[: :]o	Data is being recorded on a disc.
480 P	Appears when HDMI output mode (480p) is selected.
576 P	Appears when HDMI output mode (576p) is selected.
720 P	Appears when HDMI output mode (720p) is selected.
1080 I	Appears when HDMI output mode (1080i) is selected.
1080 P	Appears when HDMI output mode (1080p) is selected.

Connections

Connections

Connecting to a TV

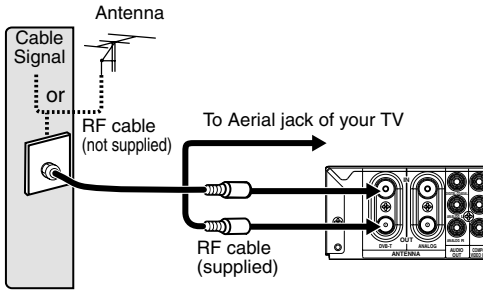
Connect the unit to a TV after considering the capabilities of your existing equipment.

Before installation, unplug your TV and this unit.

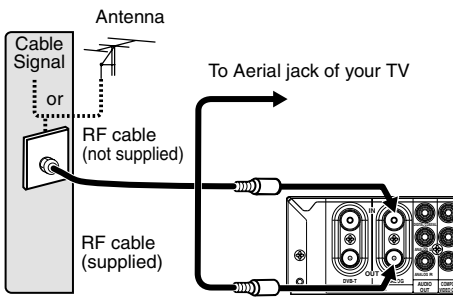
Using the Scart socket

1 Make a connection for the TV signal. Depending on the TV signal's situation, choose one of following methods (A-C).

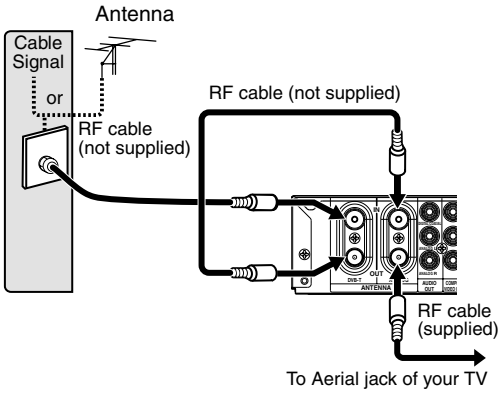
A: Receiving DVB-T signal:
If you are in an area that DVB-T signals are available, connect the antenna or cable to the ANTENNA IN (DVB-T) jack of this unit, then connect the ANTENNA OUT (DVB-T) jack of this unit to the Aerial jack of your TV. Use the supplied RF cable.



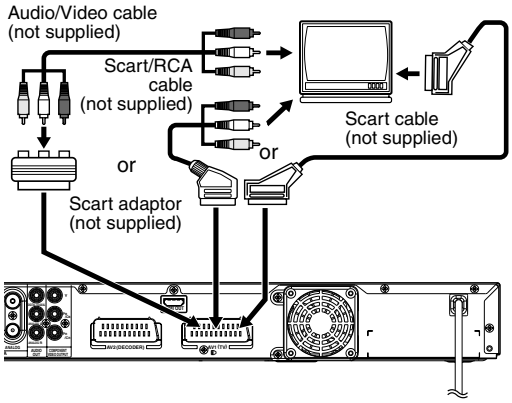
B: Receiving ANALOG signal:
If you are in an area that DVB-T signals are not available, connect the antenna or cable to the ANTENNA IN (ANALOG) jack of this unit, then connect the ANTENNA OUT (ANALOG) jack of this unit to the Aerial jack of your TV. Use the supplied RF cable.



C: Receiving both DVB-T and ANALOG signal:
If you need to receive both DVB-T and ANALOG signal (for hotels that send out cable and DVB-T signals together etc.), connect the antenna or cable to the ANTENNA IN (DVB-T) jack of this unit, and connect the ANTENNA OUT (DVB-T) jack to the ANTENNA IN (ANALOG) jack of this unit, then connect the ANTENNA OUT (ANALOG) jack to the Aerial jack of your TV.



2 After you made a connection for the TV signal, connect AV1 (TV) Scart socket of this unit to the Scart socket of your TV. Use a commercially available Scart cable.



Note

- If your TV does not have a Scart socket, use a commercially available Scart adaptor or Scart/RCA cable to connect.
- Connect this unit directly to the TV. If the AV cables are connected to a VCR, pictures may be distorted due to the copy protection system.
- When changing the "Video Out" setting ("SCART (RGB)", "Component Interlace (I)" or "Component Progressive (P)"), connect to the corresponding jack on the TV. If the setting is changed, for example, to "Component Interlace (I)" or "Component Progressive (P)" while the scart cable is connected to the TV, a distorted video signal may be output.

Selecting Progressive Scan (576p/480p or Interlaced 576i/480i) Playback

- If your TV is compatible with progressive scanning (576p/480p), connect the TV to the COMPONENT VIDEO OUTPUT jacks of this unit and set "Video Out" setting to "Component Progressive (P)" in the setup menu (See page 84.). Next, set your TV to the progressive scan mode.
- If your TV is not compatible with progressive scan, set "Video Out" setting to "Component Interlace (I)".
- Use a commercially available adaptor if the Video input jacks of your TVs or monitors are the BNC type.

Using the COMPONENT VIDEO OUTPUT jacks and the AUDIO OUT (ANALOG L/R) jacks

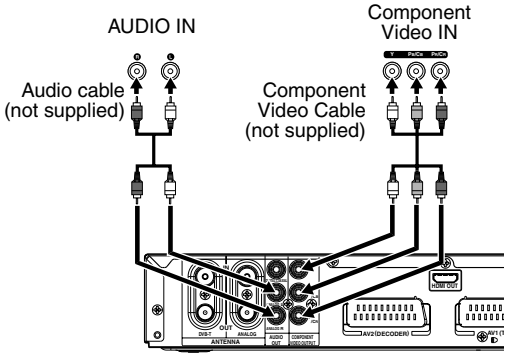
If your TV has Component Video input jacks, use a Component Video cable and an Audio cable (to connect the AUDIO OUT (ANALOG L/R) jacks).

- Component connection provides the better quality picture.

3 Follow step 1 to 2 on page 20.

4 Connect COMPONENT VIDEO OUTPUT jacks of this unit to the Component Video input jacks of your TV. Use a commercially available Component video cable.

5 Connect the AUDIO OUT (ANALOG L/R) jacks of this unit to the analogue Audio input jacks of your TV. Use a commercially available Audio cable.



- After you have made the connections, set the "Video Out" setting. (See page 84.)

Note for a TV with no Scart socket:

- This unit has no RF modulator, so this type of TV cannot be used.
- Only component and HDMI connections are compatible with the Progressive Scan.

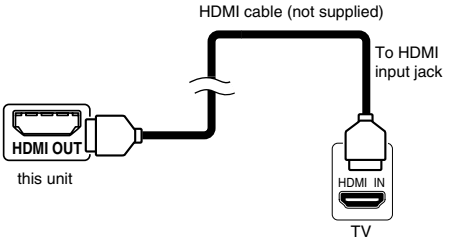
Connection to a TV with an HDMI Compatible Port

[HDMI CONNECTION]

A simple 1-cable connection with a device having an HDMI (high-definition multimedia interface) connector allows digital transfer of the digital images of DVD-video and other devices. This is the best method to connect this unit. It can minimise the deterioration of image quality.

Use the HDMI cable (commercially available) for connection.

Connect the HDMI output jack of this unit to the HDMI input jack of TV.



Selecting HDMI mode

Press **[HDMI]** to select the HDMI output mode. The output mode changes as follows every time **[HDMI]** is pressed. 576p (PAL) / 480p (NTSC) → 720p → 1080i → 1080p (An HDMI mode that is not supported by the display device will be skipped.)

Actual Output Modes by Media

Audio recording format of the disc		Dolby Digital / DTS / MPEG setting of this unit	Actual output
DVD-video	Dolby Digital	PCM	2channel PCM
		Stream	Dolby Digital
	LPCM	PCM	2channel PCM
		Stream	
	DTS	OFF	-
		ON	DTS
	MPEG	PCM	2channel PCM
		Stream	MPEG
DivX®	Dolby Digital	PCM	2channel PCM
		Stream	Dolby Digital
	MP3	PCM	2channel PCM
		Stream	
	MP2	PCM	2channel PCM
		Stream	MPEG

For audio CD, video CD and MP3 files, 2 channel PCM will be output regardless of the "Dolby Digital" setting.

If the connected device is not compatible with HDMI BITSTREAM, audio will be output as PCM even if you select "Stream" in "Dolby Digital" setting. (See page 82.)

Copyright protection system
To play back the digital video images of a DVD via an HDMI connection, it is necessary that both the player and the display device (or an AV amplifier) support a copyright protection system called HDCP (high-bandwidth digital content protection system). HDCP is copy protection technology that comprises data encryption and authentication of the connected AV device. This unit supports HDCP. Please read the operating instructions of your display device (or AV amplifier) for more information.

* HDMI: High Definition Multimedia Interface

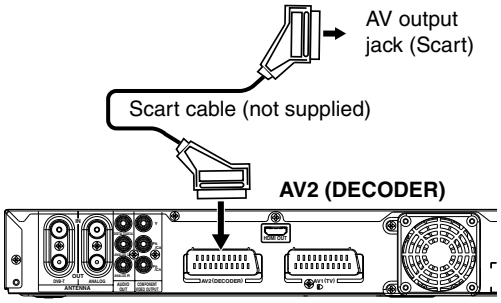
Note

- Because HDMI is an evolving technology, it is possible that some devices with an HDMI input may not operate properly with this unit.
- When using an HDCP-incompatible display device, the image will not be viewed properly.
- Among the devices that support HDMI, some devices can control other devices via the HDMI connector; however, this unit cannot be controlled by another device via the HDMI connector.
- The audio signals from the HDMI connector (including the sampling frequency, the number of channels and bit length) maybe limited by the device that is connected.
- Among the monitors that support HDMI, some do not support audio output (for example, projectors). In connections with device such as this unit, audio signals are not output from the HDMI output connector.
- When this unit's HDMI connector is connected to a DVI-D compatible monitor (HDCP compatible) with an HDMI-DVI converter cable, the signals are output in digital RGB.
- If the connected equipment is not compatible with HDMI BITSTREAM, DTS sound will not be output.
- When the power failure occurs, or when you unplug the unit, some problems in the HDMI setting might occur.
  Please check and set the HDMI setting again.

Connecting to External Equipment

This unit has three input terminals which can be selected using the input select button of the remote control, AV1 or AV2 on the rear panel and AV3 on the front panel. Be sure that all the units are switched off before making connections.

Recording from a DVD player, Satellite Box or other Audio-Video equipment with a Scart output socket (AV2)



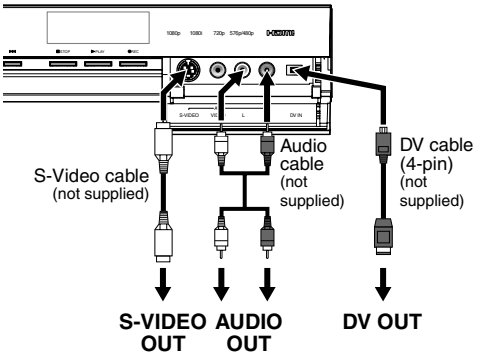
Notes

- When you record a TV programme from a Satellite Box, you must connect a Scart cable to AV2 (DECODER). (See page 45.)
- When AV2 is connected, the signal from the AV2 will be output automatically. If you want to monitor the signal from other input, you must press **[DISPLAY]** first. Then, select the desired input to monitor with **[INPUT SELECT ⊖]**.

Recording from a camcorder or other Audio-Video equipment with no Scart output socket (AV3)

If no S-Video input jack is available, connect to VIDEO input jack on the front panel using an RCA Video cable.
Change the setup when using S-VIDEO input jack. (See page 47.)
When connecting a DV-camcorder, use DV input jack of AV4 (Front) instead of S-VIDEO IN or VIDEO IN jack.

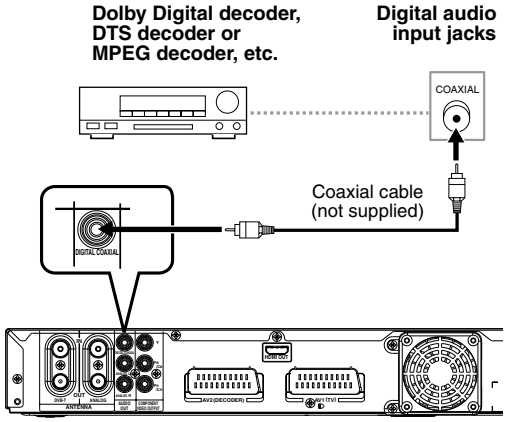
AV3 (Front)



Note

- When connecting an external device of monaural output to this unit, use AUDIO L jack of AV3.

Digital Audio for Better Sound Quality



The connections illustrated above are optional for better sound.

1 For clear digital sound quality, use the AUDIO OUT (DIGITAL COAXIAL) jack to connect your digital audio equipment.

If the audio format of the digital output does not match the capabilities of your receiver, the receiver will produce a strong, distorted sound or no sound at all.

Connecting a Dolby Digital™ decoder, DTS decoder or MPEG decoder

- Connecting multi-channel Dolby Digital decoder allows you to enjoy the Multi-channel Dolby Digital surround system as well as DTS decoder, Multi-channel surround system.
- After connecting to a Dolby Digital decoder, set “Dolby Digital” to “Stream” in the Audio Out menu. (See page 82.)
- After connecting to a DTS decoder, set “DTS” to “ON” in the Audio Out menu. (See page 82.)
- After connecting to a MPEG decoder, set “MPEG” to “Stream” in the Audio Out menu. (See page 82.)

Connecting to an MD deck or DAT deck

- The audio source recorded in Dolby Digital Multi-channel surround format cannot be recorded using an MD or DAT deck as a digital sound.
- If not connected to a Dolby Digital decoder, set “Dolby Digital” to “PCM” in the Audio Out menu. Playing back a DVD using incorrect settings may generate noise distortion and damage speakers.
- Set “Dolby Digital” and “MPEG” to “PCM” and set “DTS” to “OFF” in the Audio Out menu for connecting to an MD or DAT deck.
- You can use AUDIO OUT (ANALOG L/R) jacks for the connection of your audio system.

After You Have Completed Connections

Switch the input selector on your TV to an appropriate external input channel. For details, refer to the Owner’s Manual of your TV.

Note

- Connect this unit directly to the TV. If the AV cables are connected to a VCR, pictures may be distorted due to the effects of the copy protection system.

Basic Setup

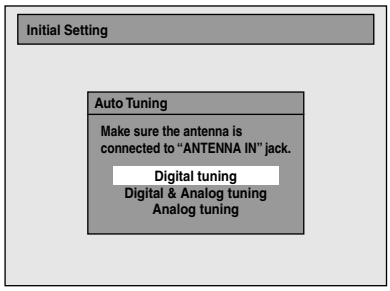
Initial Setting

When you turn on this unit for the first time, you need to follow these steps.

1 Press [I/⏻ ON/STANDBY].

2 Turn the TV on. Select the input to which the unit is connected.

3 Select your desired channel preset type using [▲ / ▼]. Then press [ENTER/OK].



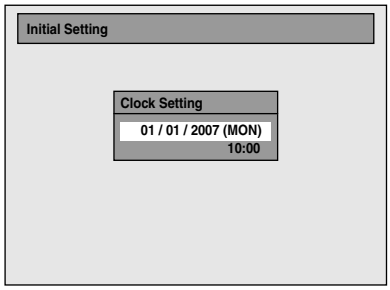
The unit will start getting channels available in your area.

Digital tuning:
Only the DVB channels receivable in your area are automatically scanned and memorised.

Digital & Analog tuning:
Both analogue and DVB channels receivable in your area are scanned and memorised automatically.

Analog tuning:
Only the analogue channels receivable in your area are automatically scanned and memorised.

4 After finished channel setting, "Clock Setting" will appear. Then press [ENTER/OK].



- If you want to adjust the clock, follow to step **4** on page 32 in "Manual Clock Setting".

5 Press [ENTER/OK] to exit.

Channel Setting

You can retune this unit or edit the channel setting with following methods.

Auto Tuning (DVB & ANALOG)

Programme the tuner to scan both analogue and DVB channels you can receive in your area.

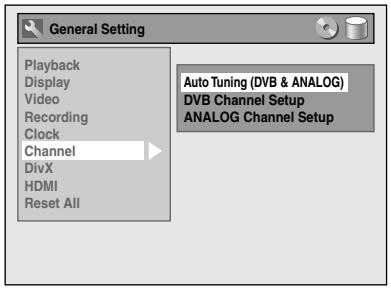
1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

General Setting menu will appear.

2 Select "Channel" using [▲ / ▼], then press [ENTER/OK].

3 Select "Auto Tuning (DVB & ANALOG)" using [▲ / ▼], then press [ENTER/OK].

The unit will start storing channels available in your area.



Wait for several minutes to finish channel storing.

- Analogue channels will be stored in channel 901-999 after it is scanned by this unit.

4 Press [SETUP] to exit.

You can select the channels memorised only in this unit by using **[PROG. ∧ / ∨]**.

To cancel auto tuning
Press **[RETURN/BACK]** or **[SETUP]** during scanning.

Note

- The selection will be affected by how you receive TV channels in your local area.
- If the auto tuning is cancelled during scanning, some channels not yet tuned may not be received.
- You cannot change the channel when DVD is in any recording mode (normal recording, One-touch Timer Recording or timer recording).

Auto Tuning (ANALOG)

ANALOG

Programme the tuner to scan only the channels you can receive in your area.

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

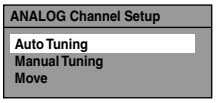
General Setting menu will appear.

2 Select "Channel" using [▲ / ▼], then press [ENTER/OK].

3 Select "ANALOG Channel Setup" using [▲ / ▼], then press [ENTER/OK].

4 Select "Auto Tuning" using [▲ / ▼], then press [ENTER/OK].

The unit will start storing channels available in your area.



Wait for several minutes to finish channel storing.
- Analogue channels will be stored in channel 901-999 after it is scanned by this unit.

5 Press [SETUP] to exit.

You can select only the channels memorised in this unit by using **[PROG. ∧ / ∨]**.

To cancel auto tuning

Press **[RETURN/BACK]** or **[SETUP]** during scanning.

Note

- The selection will be affected by how you receive TV channels in your local area.
- If the auto tuning is cancelled during scanning, some channels not yet tuned may not be received.
- You cannot change the channel when this unit is in any recording mode (normal recording, One-touch Timer Recording or timer recording).
- Sorting of TV channels from 901 to 906 will be performed automatically as follows.
  901: BBC1 902: BBC2 903: ITV
  904: CH4 905: CH5 906: SKY NEWS
- If you are using a satellite receiver, turn it on and select SKY NEWS before commencing tuning.

Manual Tuning (ANALOG)

ANALOG

You can preset an analogue channel manually and individually.

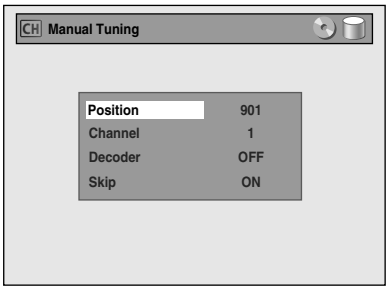
1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Channel" using [▲ / ▼], then press [ENTER/OK].

3 Select "ANALOG Channel Setup" using [▲ / ▼], then press [ENTER/OK].

4 Select "Manual Tuning" using [▲ / ▼], then press [ENTER/OK].

5 Select "Position" using [▲ / ▼], then press [▶].



6 Select the position number you wish to use using [the Number buttons] or [▲ / ▼], then press [◀].

- You can select position number 901-999.
- With **[the Number buttons]**, you only need to enter the last 2 digit numbers.

7 Select "Channel" using [▲ / ▼], then press [▶].

8 Press [▲ / ▼] to start scanning.

- The tuner will begin to search up or down automatically. When a channel is found, the unit will stop searching and the picture will appear on the TV screen.
- You can select a desired channel number using **[the Number buttons]**. Refer to the following Channel Plan table and press the three digits to select the channel number.
  (To select channel 4, press **[0]** first and then press **[0]** and **[4]**. Or press **[4]** and then "– – 4" appears and wait for 2 seconds.)
- If this is the channel you want, press **[◀]**.

Channel Plan	
CH Indication	**TV Channel**
01 – 10	IRA-IRJ, GAP
21 – 69	E21 – E69
74 – 78	X, Y, Z, Z+1, Z+2
80 – 99, 100	S1 – S20, GAP
121 – 141	S21 – S41

This unit can receive the Hyper and Oscar frequency bands.
- If "Skip" is set to "ON", select "Skip" using [▲ / ▼], then press [▶]. Select "OFF" using [▲ / ▼], then press [◀].
- If you want to decode scrambled signals, select "Decoder" using [▲ / ▼], then press [▶]. Select "ON" using [▲ / ▼], then press [◀].
- To store another channel, repeat steps **5** to **8**.

9 After completion, press [SETUP] to exit.

To Skip a Preset Channel

ANALOG

You can set the unit to skip channels. You can no longer receive or watch when you access channels using **[PROG. ∧ / ∨]**.

1 Follow steps 1 to 4 in "Manual Tuning (ANALOG)" on page 25.

2 Select "Position" using [▲ / ▼], then press [▶].

3 Select the position number you wish to skip using [the Number buttons] or [▲ / ▼], then press [◀].

4 Select "Skip" using [▲ / ▼], then press [▶].

5 Select "ON" using [▲ / ▼], then press [◀].
- To skip another channel, repeat steps **2** to **5**.

6 Press [SETUP] to exit.

Move

ANALOG

You can replace two channels.

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Channel" using [▲ / ▼], then press [ENTER/OK].

3 Select "ANALOG Channel Setup" using [▲ / ▼], then press [ENTER/OK].

4 Select "Move" using [▲ / ▼], then press [ENTER/OK].

5 Select the position number of which you want to change the channel using [▲ / ▼], then press [ENTER/OK].

You cannot select a position number where "– – –" appears next to the number, because "Skip" is set to "ON" for that position number.

6 Move the channel to another position number using [▲ / ▼], then press [ENTER/OK].
- To move another channel, repeat steps **4** to **6**.

7 Press [SETUP] to exit.

Auto Tuning (DVB)

DVB

You can programme the tuner to scan only the DVB channels that you can receive in your area.

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

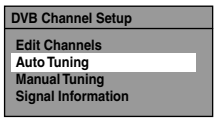
General Setting menu will appear.

2 Select "Channel" using [▲ / ▼], then press [ENTER/OK].

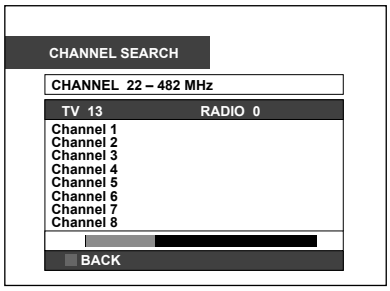
3 Select "DVB Channel Setup" using [▲ / ▼], then press [ENTER/OK].

4 Select "Auto Tuning" using [▲ / ▼], then press [ENTER/OK].

The unit will start storing channels available in your area.



The tuner scans and memorise all the active DVB channels (TV / RADIO) in your area.



- Press **[GREEN]** after Auto Tuning is completed, then the lowest memorised DVB channel appears on the screen, and you can use **[PROG. ∧ / ∨]** for the memorised DVB channels.
- If you press **[RETURN/BACK]** or **[RED]** during the scanning, the screen will return to the previous displayed menu, and Auto Tuning will be cancelled.
- If you press **[SETUP]** during the scanning, this operation will stop and the lowest memorised DVB channel will appear on the TV screen.

Manual Tuning (DVB)

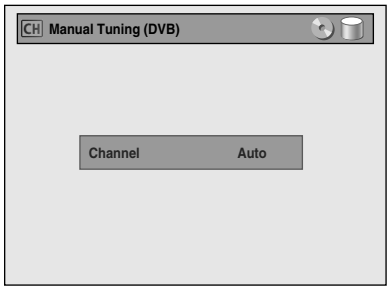
DVB

You can preset a DVB channel manually and individually.

1 Follow steps 1 to 3 in "Auto Tuning (DVB)" on page 26.

2 Select "Manual Tuning" using [▲ / ▼], then press [ENTER/OK].

3 Select your desired position number using [▲ / ▼], then press [ENTER/OK].



- The tuner will begin to search up or down automatically. When a DVB channel is found, the unit will stop searching.
- When "Auto" is selected the unit will search for the channels which have not been stored in channels memory.

4 Press [GREEN] to activate the setting.

To Select a Channel

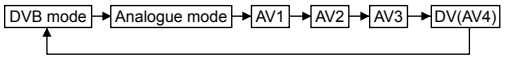
You can select memorised channels by using **[PROG. ∧ / ∨]**. For DVB channels, you can use the favourite lists (TV1-TV4) to loop channels only within the favourite list. (Refer to "TV Title List" on page 28.) You can select a channel using **[PROG. ∧ / ∨]** or directly enter the channel using **[the Number buttons]** on the remote control.

Notes on using [the Number buttons]:

- For one or two digit number channels, the channels will be identified 2 seconds after you press the channel number, or right after you press **[ENTER/OK]**. For example, if you want to select channel 6, press **[6]** and wait for 2 seconds or press **[ENTER/OK]**. You can only select channels 1 to 999.
- Analogue channels will be stored in channel 901-999 and DVB channels will be stored in channel 1-900 after it is scanned by this unit.

To switch DVB, analogue and external input (AV1/AV2/AV3/DV(AV4)) mode.

You can switch between DVB, analogue and external input (AV1/AV2/AV3/DV(AV4)) mode by pressing **[INPUT SELECT ⊖]** repeatedly. The mode changes as follows:

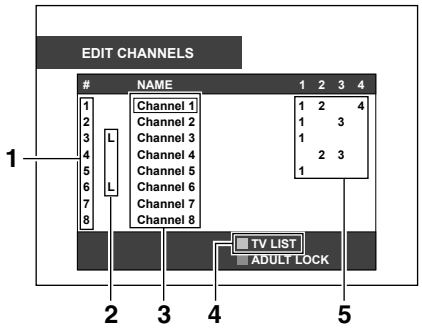


- You can also switch the mode by using **[PROG. ∧ / ∨]**.
- You cannot select any DVB channels using **[the Number buttons]** when you are in analogue or external input (AV1/AV2/AV3/DV(AV4)) mode.
- You cannot select any analogue channels using **[the Number buttons]** when you are in DVB mode.

Edit Channels

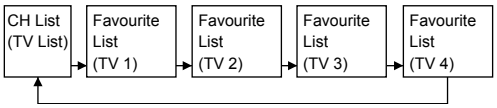
With the EDIT CHANNELS screen, you can see all memorised DVB channels, create favourite lists and set the viewer limitation to channels (Adult lock).
To display EDIT CHANNELS screen, after following steps 1 to 3 in "Auto Tuning (DVB)" on page 26, select "Edit Channels" using **[▲ / ▼]**, then press **[ENTER/OK]**.

Guide to EDIT CHANNELS screen



1 Channel numbers.
2 Appears when the channel is locked for the Adult Lock.
3 Channel names.
4 Type of displayed TV title list.
5 Indicates the registered favourite list number for the channels.

The EDIT CHANNELS screen consist of list of the all memorised DVB channels (TV LIST), and four favourite lists (TV1 - TV4). You can switch between those channels by pressing **[GREEN]** repeatedly.



- If the favourite list does not have any channels, the list will be skipped.
- If there are more than one page of the CH List (TV List) or the favourite list (TV1 -TV4), you can turn the pages by using **[◀ / ▶]**.

TV Title List

DVB

You can create 4 different favourite lists (TV1 - TV4) with your preferred DVB channels. By setting the certain favourite list, you can loop channels only within the list when you use **[PROG. ∧ / ∨]**.

1 Follow steps 1 to 3 in "Auto Tuning (DVB)" on page 26.

2 Select "Edit Channels" using [▲ / ▼], then press [ENTER/OK].

3 Select the DVB channel you want to add to the favourite list using [▲ / ▼], then select the number of the favourite list you want to add to using [the Number buttons] (1, 2, 3, or 4).

- To add another channels to the favourite list, repeat steps **3**.

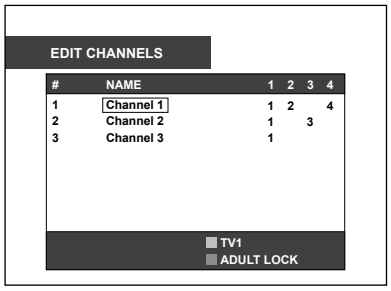
To delete from the favourite lists:

- Select the DVB channels you want to delete from the favourite lists using **[▲ / ▼]** then select the number of the favourite list you want to delete from using **[the Number buttons]** (1, 2, 3 or 4).

4 Press [SETUP] or [RETURN/BACK] to exit.

To set the favourite lists:

- At the step **3**, press **[GREEN]** repeatedly to select the list you want to set, then press **[SETUP]** or **[RETURN/BACK]** to exit.



Note

- Empty favourite lists will be skipped when you switch between the lists by pressing **[GREEN]**.

Changing the Channel Order of the Favourite List

DVB

You can change the order of the channels in favourite list.

1 Follow the steps 1 to 2 in the "TV Title List".

2 Select a favourite list (TV1-TV4) by pressing [GREEN] repeatedly.

3 Select the DVB channel you want to move using [▲ / ▼], then press [YELLOW].

4 Select the position you want to move the channel to using [▲ / ▼], then press [YELLOW].

- To move another channel, repeat steps **3** to **4**.

5 Press [SETUP] to exit.

Note

- This function is available for only favourite lists (TV1-TV4).

Adult Lock

DVB

You can select DVB channels to prevent access to it.

1 Follow steps 1 to 3 in "Auto Tuning (DVB)" on page 26.

2 Select "Edit Channels" using [▲ / ▼], then press [ENTER/OK].

3 Select the DVB channel you want to limit the access to using [▲ / ▼], then press [BLUE].

- "L" is displayed on the left side of the channel name when the channel is locked.
- To unlock the channel, select locked channel, then press **[BLUE]**.

4 Press [SETUP] to exit.

- After you turn off the unit once, a Pincode will be required to view the channels.
- To set the Pincode, refer to "Pincode Setting for Adult Lock" on page 30.

Signal Information

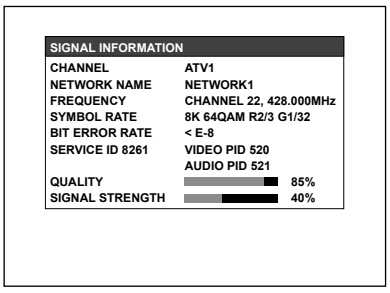
DVB

You can check the detailed information of the current DVB channel.

1 Follow steps 1 to 3 in "Auto Tuning (DVB)" on page 26.

2 Select "Signal Information" using [▲ / ▼], then press [ENTER/OK].

- Signal Information display will appear.



3 Press [SETUP] to exit.

- "Signal Information" is not available for analogue channel and external input (AV1/AV2/AV3).
- "Signal Information" is also not available while the Pincode input field for locked DVB channel is displayed.

TV View Operation

The following operations are available while viewing TV channels through this unit's tuner.

Selecting the Audio Mode

You can switch between TV audio modes by pressing **[AUDIO ◌))]** on the remote control. Each mode is indicated on the TV screen.

• During reception of analogue bilingual broadcasts

Mode	Audio output	Display on the TV screen
Main	Main audio from both speakers	Main
Sub	Sub audio from both speakers	Sub
Main / Sub	• Main audio from the left speaker • Sub audio from the right speaker	Main / Sub

• During the reception of DVB broadcast, when you press **[AUDIO ◌))]**, sound track display will appear. Press **[AUDIO ◌))]** repeatedly to change the sound track.

• If the programme does not have more than one sound track, **[AUDIO ◌))]** is not effective.

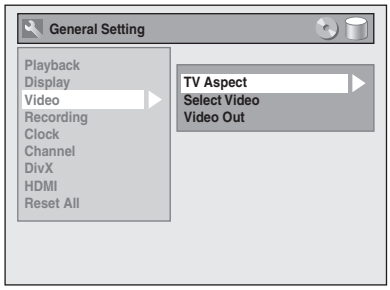
Selecting the TV Aspect Ratio

You can select the TV aspect ratio to match the format of the programme you are playing back with the unit and that of your TV screen (4:3 standard or 16:9 wide screen TV).

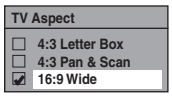
1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Video" using [▲ / ▼], then press [ENTER/OK].

3 Select "TV Aspect" using [▲ / ▼], then press [ENTER/OK].



4 Select the desired option using [▲ / ▼], then press [ENTER/OK].



5 Press [SETUP] to exit.

Hint

If you have a standard TV:
- Select "4:3 Letter Box" for a full width picture with black bars at the top and bottom.
- Select "4:3 Pan & Scan" for a full height picture with both sides trimmed.

If you have a wide screen TV:
- Select "16:9 Wide".

Digital Teletext Reception

DVB

Many broadcasters provide a DVB Teletext service in the form of a dedicated Teletext channel. This Digital service includes high quality text and graphics along with advanced navigation options.

• Make sure "Service Preference" is set to "Data Service" (See page 31.)

1 Press [TEXT] to display Teletext screen.

• Teletext for the TV channel you have selected will be displayed.

2 Use [RED] / [GREEN] / [YELLOW] / [BLUE] to follow the instructions on screen.

3 Press [TEXT] to switch the Teletext display off.

Note

• To use DVB Teletext, you must set "Service Preference" to "Data Service". (See page 31.)

• To set the Teletext language, refer to "Language Setting" on page 31.

EPG (Electronic Programme Guide)

DVB

Electronic programme guide (EPG) gives you a list of the DVB programmes and detailed information about the programmes. To call up EPG (Electronic Programme Guide) while viewing DVB/analogue channel or external input (AV1/AV2/AV3), press **[GUIDE]**. You can also call up EPG by following steps.

1 In stop mode, press [SETUP]. Select "Timer Programming" using [▲ / ▼], then press [ENTER/OK].

2 Select "EPG" using [▲ / ▼], then press [ENTER/OK].

• Select the TV programme using **[▲ / ▼]**, then press the **[ENTER/OK]** to watch the selected channel or press **[BLUE]** to display time schedule of the DVB channel.

• From the EPG screen, you can also set the timer recording. Refer to "Timer Recording (EPG)" on page 45.

Subtitle

DVB

Many DVB channels transmit Subtitle information along with their DVB channels. With this unit, you can retrieve and display it on the screen.

• Make sure “Service Preference” is set to “Subtitle”. (See page 31.)

1 While viewing DVB channels, press [DISPLAY].

2 Select the icon using [◀ / ▶], then press [ENTER/OK] within 1 second, or wait for 1 second to display the selection menu.

3 Select “ON” using [▲ / ▼], then press [ENTER/OK].

Subtitle will be displayed, and if you select “OFF” the subtitle will disappear.

Note

- To use subtitle, you must set “Service Preference” to “Subtitle”. (See page 31.)
- To set the subtitle language, refer to “Language Setting” on page 31.

DVB Menu Setting

You can make settings of the digital tuner from the DVB Menu.

Pincode Setting for Adult Lock

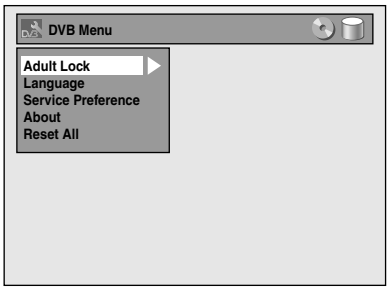
DVB

You can select Adult Lock ON or OFF and also change Pincode.

1 In stop mode, press [SETUP].

2 Select “DVB Menu” using [▲ / ▼], then press [ENTER/OK].

3 Select “Adult Lock” using [▲ / ▼], then press [ENTER/OK].



4 Select “ON” or “OFF” using [▲ / ▼], then press [ENTER/OK].

5 To set the Adult Lock ON:

1) Enter your desired Pincode using **[the Number buttons]**, then press **[ENTER/OK]**.
2) For confirmation, enter the Pincode again using **[the Number buttons]**.

To set the Adult Lock OFF:

Enter the Pincode using **[the Number buttons]**.

• While entering the Pincode, use **[◀]** or **[CLEAR]** to clear the numbers once entered.

6 Press [SETUP] to exit.

Note

- Once the Adult Lock has been set to “ON”, Pincode will be required in order to view or timer recording the locked channels, and to execute the “Auto Tuning” for DVB or “Edit Channels”.
- If you forgot the Pincode, press **[4]**, **[7]**, **[3]**, **[7]** to cancel the Pincode.

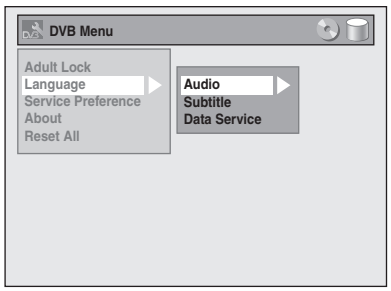
Language Setting

DVB

1 Follow steps 1 to 2 in "Pincode Setting for Adult Lock" on page 30.

2 Select "Language" using [▲ / ▼], then press [ENTER/OK].

3 Select the item you want to change the language using [▲ / ▼], then press [ENTER/OK].



Audio : Set the Audio language
Subtitle : Set the Subtitle language
Data Service : Set the Digital Teletext language

4 Select a language using [▲ / ▼], then press [ENTER/OK].

5 Press [SETUP] to exit.

Note

- You can also change the audio language using **[AUDIO))))]** if it is available.
- The Audio, Subtitle and Digital Teletext language setting may not be available for some broadcast.

Service Preference Setting

DVB

Set whether you receive the Teletext or Subtitle information from the DVB.

1 Follow steps 1 to 2 in "Pincode Setting for Adult Lock" on page 30.

2 Select "Service Preference" using [▲ / ▼], then press [ENTER/OK].

3 Select a desired information to receive using [▲ / ▼], then press [ENTER/OK].

4 Press [SETUP] to exit.

Note

- This unit supports MHEG5 data service.
- This unit does not support MHP data service.

About

DVB

You can check the current DVB system software version of this unit.

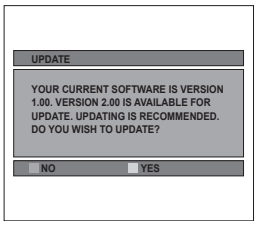
1 Follow steps 1 to 2 in "Pincode Setting for Adult Lock" on page 30.

2 Select "About" using [▲ / ▼], then press [ENTER/OK].

3 Press [SETUP] to exit.

Note

- Whenever a new software is available, it is always advisable to accept and download the software. In case new software is available, you will see a message when you switch on the DVB channel.


UPDATE
YOUR CURRENT SOFTWARE IS VERSION 1.00. VERSION 2.00 IS AVAILABLE FOR UPDATE. UPDATING IS RECOMMENDED. DO YOU WISH TO UPDATE?
NO
YES

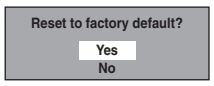
Resetting the DVB Menu Setting to Default

DVB

1 Follow steps 1 to 2 in "Pincode Setting for Adult Lock" on page 30.

2 Select "Reset All" using [▲ / ▼], then press [ENTER/OK].

3 Select "Yes" using [▲ / ▼], then press [ENTER/OK].



"Are you sure?" will appear. Select "Yes" using **[▲ / ▼]**, and then press **[ENTER/OK]**.

4 Press [SETUP] to exit.

Note

- The Pincode for Adult Lock will remain unchanged even after resetting the DVB Menu setting to default.

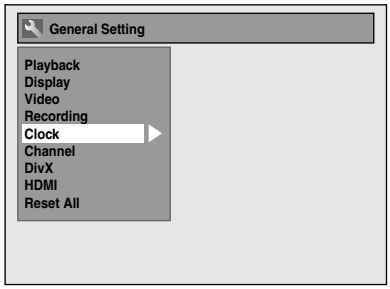
Setting the Clock

Auto Clock Setting

This unit receives time signals from the analogue / DVB channels, and set the clock automatically. Set the channel tuning before setting Auto Clock.

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Clock" using [▲ / ▼], then press [ENTER/OK].



3 Select "Auto Clock Setting" using [▲ / ▼], then press [ENTER/OK].

4 Select "ON" using [▲ / ▼], then press [ENTER/OK].

5 Press [SETUP] to exit.

6 Press [I/⏻ ON/STANDBY] to turn off.

The Auto clock function is activated.
This unit will search for the time every time when the power is turned off.
Leave the unit off for about 10 seconds to give it time to set the clock.

Hint

- If you want to cancel "Auto Clock Setting", select "OFF" using **[▲ / ▼]**, and then press **[ENTER/OK]** at step **4**.

Note

- The default setting of "Auto Clock Setting" is "ON".
- The clock may set itself automatically after you connect the antenna cable to the unit and plug in the mains cable. In this case, the current time will appear on the front panel display.
- If there are only analogue channels memorised in this unit:
  - The channel assigned to "904" must receive the PDC signal in order to set the clock automatically.
  - The unit will correct the current time by receiving PDC broadcasts whenever the power is turned off.
  - Between 23:00 and 1:00, the Auto Clock function will not operate even when the power is turned off.
- The clock cannot be set automatically if you are not receiving a channel in your area that carries a time signal. In this case, set the clock manually.
- The unit will also correct the current time automatically at 8:00 if the unit is in standby mode or if you are watching DVB channel.

Manual Clock Setting

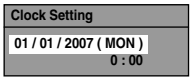
1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Clock" using [▲ / ▼], then press [ENTER/OK].

3 Select "Clock Setting" using [▲ / ▼], then press [ENTER/OK].

Default date will appear.

4 Press [ENTER/OK] again.



5 Enter the date (day / month / year) using [▲ / ▼].

Press **[▶]** to move the cursor to the next field. If you wish to go back to the previous field, press **[◀]**.

6 Enter the time (hours / minutes) using [▲ / ▼], then press [ENTER/OK].

The clock will start.

- Although seconds are not displayed, they will be counted from zero.

7 Press [SETUP] to exit.

Note

- Your clock setting will be lost if either there is a power failure or the unit is unplugged for more than 30 seconds.

Recording

Information on DVD Recording

Type of Discs

This unit can record on DVD-RW/-R discs and DVD+RW/+R discs.
DVD-R/+R discs allow you to record programmes only once, and the recorded contents can be erased although the space left on the disc does not change.
DVD-RW/+RW discs allow you to record programmes repeatedly, and the recorded contents can be erased.
There are 3 recording formats: VR mode, Video mode and +VR mode. VR and Video modes are available for DVD-RW discs while as only Video mode is available for DVD-R discs. +VR mode is available for DVD+RW/+R discs.

Video mode is the same recording format as used on the pre-recorded DVD-Videos you purchase in local shops. You can play back the discs recorded in this format on most of the DVD players. You will need to finalise such discs (see page 53) before playing them back on other DVD players. Unless finalised, you can record additional materials or edit discs recorded in Video mode with this unit.
VR (Video Recording) mode is a basic recording format for DVD-RW discs.
VR mode offers advanced editing, and you can record and edit material repeatedly, however it is playable only on VR mode compatible unit. Finalisation is recommended before playing them back on other unit.
+VR mode is a recording format for DVD+RW/+R disc. +VR mode offers basic editing, and it is playable on most DVD players. Finalisation is recommended before playing them back on other unit.

Recording Mode

You can select a recording mode from 5 options. The recording time will vary depending on the recording mode you select as follows.

Recording mode	Recording time			Video / Sound Quality
	DVD 12 cm	DVD 8 cm	HDD	
XP	60 min	18 min	56 hrs	☆☆☆☆☆
SP	120 min	36 min	112 hrs	☆☆☆☆
LP	240 min	72 min	224 hrs	☆☆☆
EP	360 min	108 min	336 hrs	☆☆
SLP	480 min	144 min	424 hrs	☆

- The recording times are estimates and actual recording time may differ.
- The audio and video quality becomes poorer as the recording time gets longer.

Restrictions on Recording

You cannot record copy-protected video using this unit. Copy-protected video includes DVD-Videos and some satellite broadcasts.
If copy-protected material is detected, recording will pause or stop automatically and an error message appears on the screen.
You can only record “Copy-once only” video using a DVD-RW disc in VR mode with Content Protection for Recordable Media (CPRM) or internal HDD.
When recording a TV broadcast or an external input, you can display copy control information on the screen.
CPRM is a scrambling copy protection system for the protection of “copy-once” broadcast programmes.
This unit is CPRM compatible, which means that you can record copy-once broadcast programmes, but you cannot then make a copy of those recordings. CPRM recordings can only be played back on DVD players that are specifically compatible with CPRM.

Information on Copy Control

Some satellite broadcasts include copy-protected information. If you wish to record them, refer to the following.

Disc type / format		Copy-free	Copy-once	Copy-prohibited
HDD		☆	☆	—
VR DVD-RW	ver. 1.1 / ver. 1.2	☆	—	—
	ver. 1.1 / ver. 1.2 CPRM compatible	☆	☆	—
Video DVD-RW	ver. 1.1 / ver. 1.2	☆	—	—
	ver. 1.1 / ver. 1.2 CPRM compatible	☆	—	—
DVD-R	ver. 2.0	☆	—	—
DVD+RW		☆	—	—
DVD+R		☆	—	—

☆ : Recordable
— : Not recordable

Note

- This unit cannot record on CD-RW or CD-R discs.
- DVD-RW/-R, DVD+RW/+R and CD-RW/-R discs recorded on a personal computer or a DVD or CD recorder may not be played back if the disc is damaged or dirty or if there is condensation on the recorder’s lens.
- If you record a disc using a personal computer, even if it is recorded in a compatible format, it may not be played back because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)
- Discs recorded in Video mode on this unit cannot record additional information using other DVD recorders.

- It is not possible to use a DVD-RW disc formatted with this unit on other DVD recorder unless the content of the disc was also recorded with this unit.
- Since recording is performed using the Variable Bit Rate (VBR) method, the actual remaining time for recording may be a little shorter than the remaining time displayed on the OSD, depending on the picture you are recording.

Making Discs Playable in Other DVD Players (Finalise)

After recording, you must finalise the disc to play it back in other players. (See page 53.)
You cannot finalise discs in other DVD recorders.

After finalising

- After DVD-R discs are finalised:
  - A Title menu is created automatically.
  - Undo finalising is not possible.
  - Additional recording or editing is not possible.
- After DVD-RW (Video mode) discs are finalised:
  - A Title menu is created automatically.
  - Undo finalising is possible. (See page 53.)
  - Additional recording or editing is possible if you undo finalise. (See page 53.)
- After DVD-RW (VR mode) discs are finalised:
  - A Title menu is not created.
  - Undo finalising is possible. (See page 53.)
  - Additional recording or editing is possible if you undo finalise. (See page 53.)
- After DVD+RW discs are finalised:
  - A Title menu is created automatically.
  - Undo finalising is possible. (See page 53.)
  - Additional recording or editing is possible even without undo finalising.
- After DVD+R discs are finalised:
  - A Title menu is created automatically.
  - Undo finalising is not possible.
  - Additional recording or editing is not possible.

About HDD

HDD is a special device which has high recording density and is suited for long-time recording or high-speed cueing but by contrast, has many factors which can cause breakage. Use HDD on the premise that you should dub the recorded programmes to a DVD disc to protect your precious videos.

HDD is a temporary storage location:
HDD is not a permanent storage location of the recorded contents. Be sure to use it as a temporary storage location until you watch the programmes once, edit them, or dub them to a DVD disc.

Be sure to dub (back up) data promptly if you find abnormalities in HDD:
If there is mechanical trouble with the HDD, grinding or other sounds may be heard or blocky noise may appear on the image. If you continue to use as it is, deterioration may continue and eventually the HDD may not be used at all. If you notice these symptoms of a failing HDD, promptly dub the data to a DVD disc. When an HDD fails, recovery of recorded content (data) may be impossible.

About the remaining capacity of HDD recording time:
In recording to HDD, the Remaining Capacity Display may differ from the actual recordable time as this unit adopts Variable Bit Rate encoding, which varies the recording (storage) amount of data in conformity with the information amount of video. Before recording to the HDD, ensure there is sufficient space on the HDD by deleting unnecessary titles in advance. (Remaining capacity will not increase if you only delete Playlists.)

Maximum Recordable Numbers of Title / Chapters

HDD:
600 original titles
600 playlists
99 chapters per original/playlist title

VR mode DVD:
99 titles per each Playlist and Original
999 chapters per each Playlist and Original

Video mode DVD:
99 titles per disc
99 chapters per title

+VR mode DVD:
49 titles per discs
254 chapters per disc
99 chapters per title

Formatting a Disc

Choosing the Recording Format of a Blank DVD-RW Disc

Video DVD-RW VR DVD-RW

When inserting a brand-new DVD-RW/+RW disc, the unit automatically starts to initialise the disc. DVD+RW disc will always be formatted in +VR mode, and DVD-RW disc will be formatted either Video or VR mode according to the recording format mode setting of the unit. Before insert a brand-new DVD-RW disc, you need to set the recording format to the desired mode. You can also manually format a DVD-RW disc once it has been used.

1 In stop mode, press [SETUP].

2 Select "DVD Menu" using [▲ / ▼], then press [ENTER/OK].

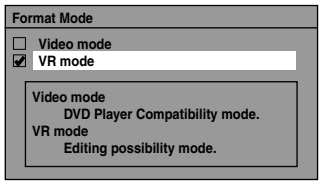
"DVD Menu" menu will appear.

3 Select "Format" using [▲ / ▼], then press [ENTER/OK].

Format menu will appear.

4 Select "Format Mode" using [▲ / ▼], then press [ENTER/OK].

5 Select "Video mode" or "VR mode" using [▲ / ▼], then press [ENTER/OK].



6 Press [SETUP] to exit.

7 Insert a blank disc.

Formatting will start.

8 Formatting is complete.

"100%" is indicated.

Note

- The recording format setting is effective only for DVD-RW discs. You cannot change the recording format for a DVD-R disc and DVD+RW/+R disc.
- You cannot mix two formats on one DVD-RW disc. If you insert a disc that has been recorded before, the recording format cannot be changed even if you change it in the Setup menu.

Make Recording Compatible

DVD+RW DVD+R

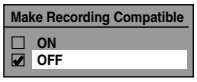
Use this feature to make the unfinalised +VR mode discs recorded on other unit recordable on this unit. When you make an additional recording on this unit with "Make Recording Compatible" set to "ON", the title list is automatically converted to this unit's style.

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Recording" using [▲ / ▼], then press [ENTER/OK].

3 Select "Make Recording Compatible" using [▲ / ▼], then press [ENTER/OK].

4 Select "ON" or "OFF" using [▲ / ▼], then press [ENTER/OK].



ON: Title list will be replaced when you make additional recordings to the discs recorded by other units.

OFF: Prohibiting additional record to the disc that has a title list created by other units.

5 Press [SETUP] to exit.

Setting Aspect Ratio for Video Mode Recording

DVD-RW (Video) DVD-R

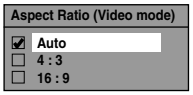
You can set aspect ratio for video mode recording.

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Recording" using [▲ / ▼], then press [ENTER/OK].

3 Select "Aspect Ratio (Video mode)" using [▲ / ▼], then press [ENTER/OK].

4 Select your desired setting using [▲ / ▼], then press [ENTER/OK].



Auto (default): It will be recorded with whichever the ratio that the programme you started to record is broadcasted with.
4:3 : Recorded in the aspect ratio of 4:3.
16:9 : Recorded in the aspect ratio of 16:9.

5 Press [SETUP] to exit.

Note

- For HDD and VR mode DVD-RW disc, the image will be recorded in whichever the ratio that the programme you record is broadcasted with, regardless of the "Aspect Ratio (Video mode)" setting.
- For DVD+RW/+R disc, the image will always be recorded in aspect ratio of 4:3.

Setting Auto Chapter

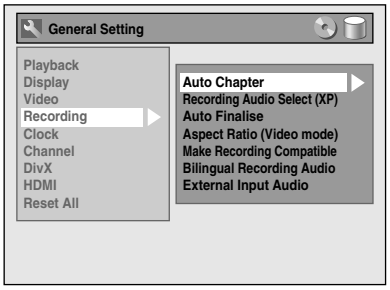
HDD DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R

The unit inserts a chapter mark periodically (every 15 minutes by default) during recording. Using the Auto Chapter menu, you can set this function off or change the time period.

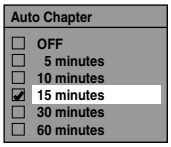
1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Recording" using [▲ / ▼], then press [ENTER/OK].

3 Select "Auto Chapter" using [▲ / ▼], then press [ENTER/OK].



4 If you wish to set "Auto Chapter" off, select "OFF" using [▲ / ▼], then press [ENTER/OK].



If you wish to change the time period for Auto Chapter, select the required time period using [▲ / ▼], then press [ENTER/OK].

5 Press [SETUP] to exit.

Note

- The interval for auto chapter marks may slightly deviate from the one you specified on the Auto chapter screen.
- A blank chapter may be created depending on the remaining time of the disc.

Reformatting a Disc Manually

Video DVD-RW | VR DVD-RW | DVD+RW

If you are using a DVD-RW/+RW disc, you can format the disc by performing "Format". You can format DVD-RW disc for either Video mode recording or VR mode recording. DVD+RW disc can be format in order to erase all content of the disc.

Note

- When you reformat the disc, the contents of the disc are erased.
- Make sure that the recording format is set to the desired mode. (Refer steps **1** to **6** in "Choosing the Recording Format of a Blank DVD-RW Disc" on page 35.)

Insert a recordable disc.

1 In stop mode, press [SETUP].

2 Select "DVD Menu" using [▲ / ▼], then press [ENTER/OK].

3 Select "Format" using [▲ / ▼], then press [ENTER/OK].

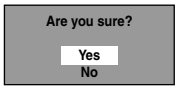
4 Select "Start" using [▲ / ▼], then press [ENTER/OK].

For DVD+RW, use **[▲ / ▼]** to select "Yes", then press **[ENTER/OK]**.

A pop up window will appear and prompt you to confirm.

5 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

e.g.) VR mode DVD-RW



Formatting will start.
If you want to cancel formatting, select "No".

6 Formatting is complete.

Note

- It is not possible to use a disc formatted with this unit on other DVD recorder. When you use a disc with another DVD recorder, format a disc using that DVD recorder.

Selecting the Sound Mode

This unit can receive bilingual broadcasts.

You can switch between modes by pressing **[AUDIO ◌))]** on the remote control. Each mode is indicated on the TV. When you record a DVB channel, only output sound channel will be recorded.

Setting External Input Audio

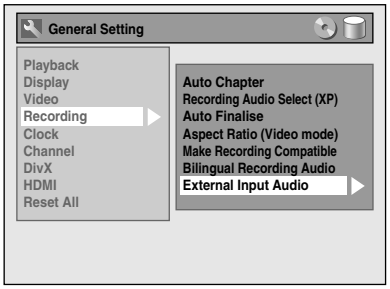
HDD | Video DVD-RW | VR DVD-RW | DVD-R | DVD+RW | DVD+R

When the external input audio is a bilingual broadcast, you can choose "Stereo" or "Bilingual" to record on a HDD/DVD. This setting is only for recording external input (AV1/AV2/AV3).

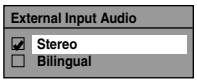
1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Recording" using [▲ / ▼], then press [ENTER/OK].

3 Select "External Input Audio" using [▲ / ▼], then press [ENTER/OK].



4 Select "Stereo" or "Bilingual" using [▲ / ▼], then press [ENTER/OK].



5 Press [SETUP] to exit.

Hint

- If you select "Stereo":
  The audio will be recorded as "stereo audio".
- If you select "Bilingual":
  The audio will be recorded as "bilingual audio" (see "Setting Bilingual Recording Audio" on page 38 for more detail).

Setting Bilingual Recording Audio

DVD-RW (Video) DVD-R DVD+RW DVD+R

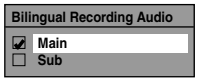
You can select either “Main” or “Sub” audio to record a bilingual broadcast in Video mode or +VR mode. This setting is only for recording analogue channel.

1 In stop mode, press [SETUP]. Select “General Setting” using [▲ / ▼], then press [ENTER/OK].

2 Select “Recording” using [▲ / ▼], then press [ENTER/OK].

3 Select “Bilingual Recording Audio” using [▲ / ▼], then press [ENTER/OK].

4 Select “Main” or “Sub” using [▲ / ▼], then press [ENTER/OK].



5 Press [SETUP] to exit.

Note

- If you are recording onto a HDD or VR mode disc, both “Main” and “Sub” will be recorded regardless of your setting here. And when you play back, you can choose either audio format or a combination of both as your playback audio.

Recording Audio Select (XP)

HDD DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R

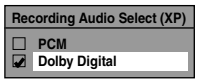
You can enjoy high quality sound recording. This function works only when the recording mode is set at XP.

1 In stop mode, press [SETUP]. Select “General Setting” using [▲ / ▼], then press [ENTER/OK].

2 Select “Recording” using [▲ / ▼], then press [ENTER/OK].

3 Select “Recording Audio Select (XP)” using [▲ / ▼], then press [ENTER/OK].

4 Select “PCM” or “Dolby Digital” using [▲ / ▼], then press [ENTER/OK].



PCM: Records PCM audio for the best quality sound.
Dolby Digital: Records Dolby Digital audio for good quality sound.

5 Press [SETUP] to exit.

Note

- “PCM” stands for Pulse Code Modulation. It changes analogue sound to digital sound without compressing audio data.
- When the recording mode is set at other than XP, the unit records “Dolby Digital” audio automatically even if you selected “PCM”.

Basic Recording

HDD DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R

Follow the steps below to record a TV programme.

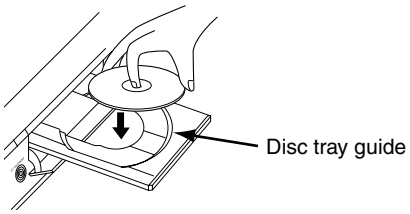
1 Press [I/⏻ ON/STANDBY] to turn on the unit.

Turn on the TV and be sure to select the input to which the unit is connected.

If you are recording to the HDD, press [HDD], then proceed to step 5.
If you are recording to a disc, press [DVD].

2 Press [OPEN/CLOSE ⏏] to open the disc tray.

3 Place the disc on the disc tray with its label facing up. Be sure to align the disc with the disc tray guide.



4 Press [OPEN/CLOSE ⏏] to close the disc tray.

5 Select the recording mode using [REC MODE]. (See page 33.)

6 Press [INPUT SELECT ⊕] to select DVB, analogue or external input mode, then select the desired channel to record using [PROG. ∧ / ∨] or [the Number buttons].

7 Press [REC ●] to start recording.

The "● HDD" or "● DVD" mark will be displayed on the TV screen for 5 seconds.

To pause the recording, press **[PAUSE ❚❚]**. Press **[PAUSE ❚❚]** or **[REC ●]** again to restart the recording.

8 Press [STOP ■] to stop the recording.

This operation may take a few moments to complete.

Hint

- You can change the channel while in the REC pause mode.

Note

- Recording starts immediately and continues until the disc is full or you stop recording.
- You cannot change the recording mode in the REC or REC pause mode.
- If you want to monitor the programme that you are recording, make sure the device such as a Satellite Box is turned off or press **[DISPLAY]** when it is connected to AV2.
- You can play back a title on one component while making a recording on other. To do so, simply select the component (HDD or DVD) you wish to use for the playback by pressing **[HDD]** or **[DVD]** during HDD / DVD recording. And then follow the normal playback procedure.
- If playback and recording are in progress at the same time, select the appropriate component by pressing **[HDD]** or **[DVD]** before you press **[PAUSE ❚❚]** or **[STOP ■]** to pause or stop the operation.
- NTSC recording is prohibited in this unit.

One-touch Timer Recording (OTR)

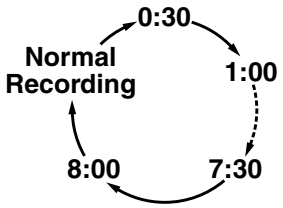
HDD DVD-RW (Video) DVD-RW (VR) DVD-R
DVD+RW DVD+R

This is a simple way to set the recording time in blocks of 30 minutes. Check that the disc you are recording onto has enough space remaining for the time you set.

1 Follow steps 1 to 6 in "Basic Recording" on page 39.

2 Press [REC ●] repeatedly until the desired recording time (30 minutes to 8 hours) appears on the TV screen.

One-touch Timer Recording will start.



- When the unit reaches the specified time, it will be turned off automatically.
- To change the recording length during One-touch Timer Recording, press **[REC ●]** repeatedly until the desired length appears.
- To cancel One-touch Timer Recording within the specified time, press **[STOP ■]**.

Hint

- The remaining recording time will appear on the TV screen during One-touch Timer Recording. Press **[DISPLAY]** to see it on the TV screen.
- The remaining recording time will be displayed on the front panel display during One-touch Timer Recording.
- Unlike the timer recording, you can perform the following operations during One-touch Timer Recording.
  - Turn off the power. (One-touch timer recording will be cancelled.)
  - Use **[REC ●]** or **[STOP ■]** on the remote control.

Note

- You cannot use the pause function during One-touch Timer Recording.
- The unit will be turned off automatically under the following conditions.
  - No space remains on the disc.
  - If a power failure occurs.
- If you want to monitor the programme that you are recording, make sure the device such as a Satellite Box is powered off or press **[DISPLAY]** when it is connected to AV2.

Timer Recording

HDD DVD-RW (Video) DVD-RW (VR) DVD-R
DVD+RW DVD+R

You can set the unit to record up to 36 programmes, up to a month in advance. Daily or weekly programme recordings are also available.

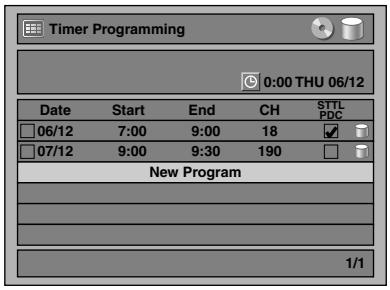
- Be sure to set the clock before entering a timer programming.

Insert a recordable disc.

1 In stop mode, press [TIMER PROG.].

Timer Programming list will appear.

2 Select "New Program" using [▲ / ▼], then press [ENTER/OK].

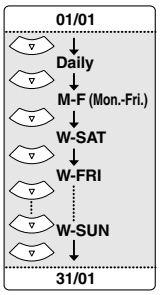


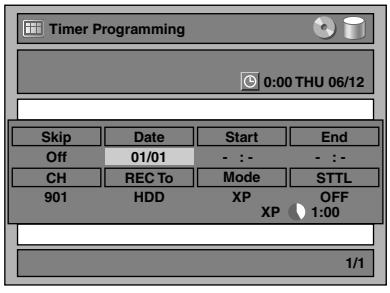
- If there are 7 programmes or more, use **[SKIP I◄◄ / ►►I]** to turn the page.

3 Enter the date using [▲ / ▼], then press [▶].

Each time you press **[▼]** at the current date, the timer recording date will change as follows.

e.g., 1st January





4 Enter the time to start and to end using [▲ / ▼], then press [▶].

5 Select the channel number to record using [▲ / ▼], then press [▶].

To record from the external input, select “AV1”, “AV2”, or “AV3”.

6 Select the recording media (“HDD” or “DVD”) using [▲ / ▼], then press [▶].

7 Select the recording mode using [▲ / ▼], then press [▶].

Refer to “Recording Mode” on page 33.

8 For DVB channel recording: Select “STTL” to “ON” or “OFF” using [▲ / ▼].

If you set “STTL” to “ON”, subtitle will be recorded too.

- When analogue channel is selected, “PDC” will be displayed instead of “STTL”.

For analogue channel recording: Select “PDC” to “ON” or “OFF” using [▲ / ▼].

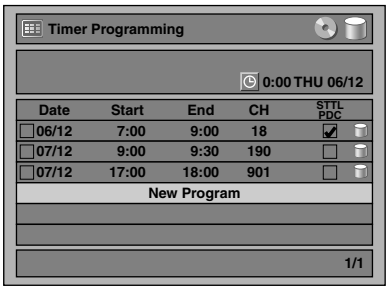
Refer to “PDC (Programme Delivery Control)” on page 42.

- When DVB channel is selected, “STTL” will be displayed instead of “PDC”.
- PDC system is only available for HDD.
- PDC system is not available for periodical timer programme.

9 Press [ENTER/OK] when all information required is entered.

Your programme setting is stored.

- To set another programme, repeat steps **2** to **9**.
- To exit, press **[TIMER PROG.]**.
- When 2 or more programmes are overlapped, “Timer program overlapped” appears, and the overlapped program will be displayed in blue. To correct the timer programme, refer to “Checking, Cancelling or Correcting the Timer Programming Information” on page 42.



The icon will appear on the front panel display.

Note

- If you have not set the clock, the clock setting window will appear instead of the Timer Programming list. Continue from step **4** in “Manual Clock Setting” on page 32 before programming the timer.
- Press **[◀ / ▶]** to move the cursor in the Timer Programming list.
- If you have a timer programme with PDC function, and if you are watching different channel from the timer programme, confirmation message to change the channel will appear 15 minutes before the program starts (the message will also re-appear 30 seconds before the program starts). The channel will automatically be changed to the programmed channel 15 seconds before the programme starts.

Alternate recording (DVD only)...

If there is no recordable disc in the unit, if the disc does not have enough space to complete the recording, or if the material is “copy-once” programme and prohibited to be recorded on a DVD, the unit will detect it and automatically record to the HDD even when DVD is selected as the recording media. If the available space on the HDD is less than that of DVD, the unit will not perform the alternate recording. This feature is available only for timer recording. Not available for one-touch timer recording.

PDC (Programme Delivery Control)

Programme Delivery Control (PDC) assures that the TV programmes you have programmed for timer recording are recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to a delayed start or extension of the programme duration. Furthermore, if a programme is interrupted, the recording will also be interrupted automatically and resumed when the programme starts again.

If the PDC signal drops out because the broadcast signal is weak, or if a broadcasting station does not transmit a regular PDC signal, the timer recording is performed in normal mode (without PDC) even if it was programmed for PDC. If the starting time of the PDC timer recording is between 0:00 and 3:59 on a given day, the PDC function will operate from 20:00 on the previous day to 4:00 on the next day. If the starting time of the PDC timer recording is between 4:00 and 23:59 on a given day, the PDC function will operate from 0:00 on the given day to 4:00 on the next day. This means that if the relevant programme is broadcasted within this period, it is recorded correctly. If the timer is not programmed correctly, the incorrect timer setting stays in effect unless you cancel it. To cancel an incorrect timer setting, refer to "Checking, Cancelling or Correcting the Timer Programming Information" below.

Note

- This feature is only available for analogue channels.

Checking, Cancelling or Correcting the Timer Programming Information

1 Press [TIMER PROG.].

Timer Programming list will appear.

2 A) To delete the timer programme:

1) Select the programme you want to delete using **[▲ / ▼]**, then press **[ENTER/OK]**.
2) Select "Delete" using **[▲ / ▼]**, then press **[ENTER/OK]**.
   Confirmation window will appear.
3) Select "Yes" using **[▲ / ▼]**, then press **[ENTER/OK]**.

B) To correct the timer programme:

1) Select the programme you want to correct using **[▲ / ▼]**, then press **[ENTER/OK]**.
2) Select "Program Change" using **[▲ / ▼]**, then press **[ENTER/OK]**.
3) Correct the timer programme by using **[▲ / ▼ / ◀ / ▶]**, then press **[ENTER/OK]**.

3 Press [TIMER PROG.] to exit.

To check the timer programming in process
Press [TIMER PROG.].

Skip the Periodical Timer Recording

You can deactivate the periodical (Daily, Mon-Fri or Weekly) timer recording temporarily.

1 In stop mode, press [TIMER PROG.].

2 Select the periodical timer recording programme you want to skip using [▲ / ▼], then press [ENTER/OK].

3 Select "Program Change" using [▲ / ▼], then press [ENTER/OK].

4 Move the cursor to the "Skip" field using [◀ / ▶], then select "ON" using [▲ / ▼] and then press [ENTER/OK] to activate the setting.

- "✔" will be displayed on the left side of the timer programme.
- The setting will go back to "OFF" after the programme is skipped once.

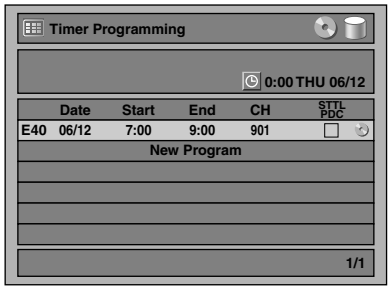
To Stop the Timer Recording in Progress

On the front panel of the unit, press [■ STOP] to stop the recording, or press and hold [STOP ■] on the remote control for 2 seconds.

- You can also stop the timer recording in progress by deleting the timer programme. Press **[TIMER PROG.]** while the timer recording is in progress, then follow **A)** in step **2)** of the "Checking, Cancelling or Correcting the Timer Programming Information" on this page.

If the Timer Programming Did Not Complete Correctly

The error number appears on the Timer Programming list.



The error programme will be displayed in gray with an error number.

The error numbers indicate:

E1–E22,
E37–E39 : Recording error
E23–E24 : Unrecordable disc
E25 : • Copy prohibited programme
: • Cannot record because of the NTSC / PAL-60 signal is received.
E26–E28 : Copy prohibited programme
E29 : Disc protected
E30 : Disc full
E31 : Already recorded 99 titles (Video mode)
E32 : Already recorded 99 titles (VR mode)
E33 : Already recorded 999 chapters
E34 : No space for Control Information
E35 : PCA (Power Calibration Area) full
E36 : Already finalised Video format disc
E40 : • There are some unrecorded parts due the overlapped timer programmes.
: • Recording did not start at the start time.
E41 : Power failure
E42 : No disc
E43 : Already 49 titles recorded (+VR mode)
E44 : Already 254 chapters recorded (+VR mode)
E45 : Copy prohibited programme
E46 : It is impossible to record additionally on a disc recorded by other units when setting “Make Recording Compatible” to “OFF”. (+VR mode)
E47 : Already 600 titles recorded on the HDD.
E49 : HDD recording is cancelled due to the insufficiency of the disc space on the HDD.

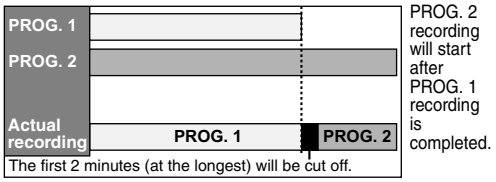
- Timer program with an error number will be cleared once the entry screen for the program is displayed.

Hints for the Timer Recording

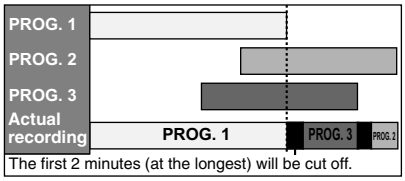
- If there is a power failure or the unit is unplugged for more than 30 seconds, the clock setting and all timer settings will be lost.
- If a disc is not inserted or if a inserted disc is not recordable (finalised DVD-RW/-R, finalised DVD+R, a fully recorded disc, etc.), the unit will perform the alternate recording to the HDD. (See page 41.)
- When a timer recording is completed, the unit will ask you whether to turn off the unit if there is no timer recording which starts within 4 minutes, except under conditions listed below.
  - During playback of HDD or DVD.
  - While displaying menus or information on the screen.
- The unit will be turned off automatically if you select "Yes" or if you do not reply in 1 minute.
- When the programmed starting and ending time are earlier than the current time, the setting will not be accepted and be cleared for redoing.
- The audio language which is selected in the "DVB Menu" will be recorded for the timer recording of digital TV broadcasting.
- Timer recording whose recording time exceeds 12 hours cannot be made.
- It is prohibited to turn off the unit from 4 minutes before the programmed starting time.
- It is prohibited to change channel from 15 seconds before the programmed starting time.
- **[REC ●]** does not work from 2 minutes before the programmed starting time. If it comes to 2 minutes before the starting time during regular or one-touch timer recording, the recording in progress will be stopped.
- Playback of DVD is prohibited from 2 minutes before the programmed starting time when the recording media is DVD. If it comes to 2 minutes before the programmed starting time during DVD playback, the playback will be stopped.
- When 2 or more programmes are overlapped, "Timer program overlapped" appears, and the overlapped programme will be displayed in blue. To correct the timer programme refer to "Checking, Cancelling or Correcting the Timer Programming Information" on page 42.
- If the Start time is earlier and the End time is later than the current time, the recording will start immediately after you press **[ENTER/OK]** at step **9** on page 41.

Priority of overlapped settings
The unit records programmes according to priority if the timer programmes overlap.

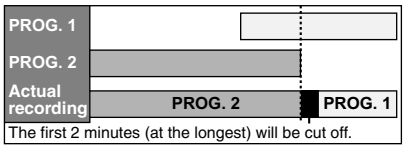
If the starting time is same:
- The timer programming set first (PROG. 1) has priority.


PROG. 1
PROG. 2
Actual recording
PROG. 1
PROG. 2
The first 2 minutes (at the longest) will be cut off.
PROG. 2 recording will start after PROG. 1 recording is completed.

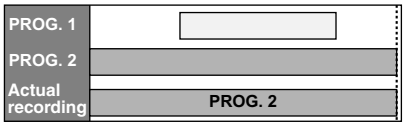
When the starting time and the ending time for each programmes are different:
- A programme that has earlier start time has priority.



If the recording time is partially overlapped:
- The timer programming with the earlier start time (PROG. 2) has priority. PROG. 1 will start after PROG. 2 recording is complete.

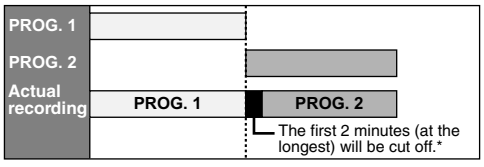


If the recording time entirely overlaps:
- The shorter timer programming (PROG. 1) is not recorded.



Note for DVD recording
- If the recording time of two programmes are overlapped, or the End time of a programme and the Start time of another is same, the first 2 minutes (at the longest) of the subsequent programme will be cut off.

If the End time of the programme currently being recorded and the Start time of the subsequent programme are same:
- The beginning of the PROG. 2 may be cut off.



*If the cut off time exceeds 3 minutes, the error number "E40" will appear in the Timer Programming list.

Timer Recording (EPG)

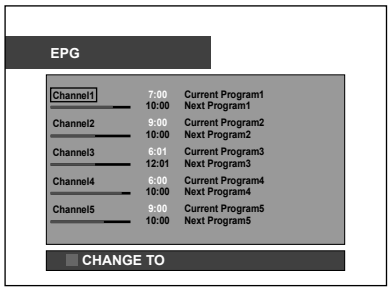
HDD DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R

With EPG system, you can programme DVB channel recording much easier. You can only choose one programme and enter the selection.

1 While viewing DVB channel, press [GUIDE].

List of DVB channels will be displayed.

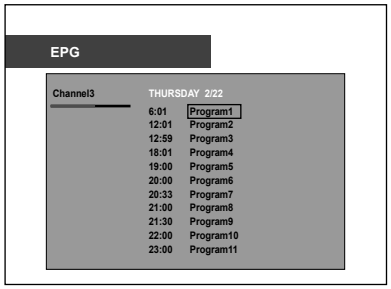
2 Select a desired channel using [▲ / ▼], then press [ENTER/OK].


EPG
Channel1 7:00 Current Program1 10:00 Next Program1
Channel2 9:00 Current Program2 10:00 Next Program2
Channel3 6:01 Current Program3 12:01 Next Program3
Channel4 6:00 Current Program4 10:00 Next Program4
Channel5 9:00 Current Program5 10:00 Next Program5
CHANGE TO

Time schedule of the DVB channel will be displayed.

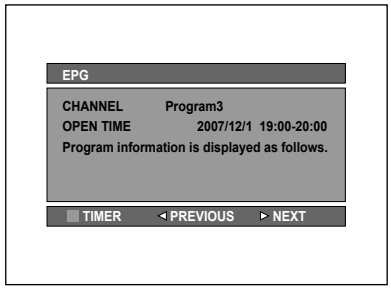
- If you press **[BLUE]** instead of **[ENTER/OK]** after you select a channel using **[▲ / ▼]**, you can watch the selected channel.

3 Select a desired programme using [▲ / ▼], then press [ENTER/OK].



EPG Programme Detail menu will be displayed.

4 Press [RED].



Timer Programming menu will be displayed.

5 Set "END", "REC To", "Mode" and "STTL" using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].

Satellite Link

HDD

You can set the unit to start recording whenever it detects the video scart control from the external tuner.

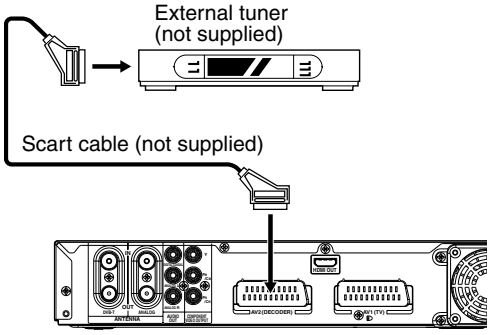
Preparing for the Satellite Link Timer Recording:

[Preparation of the external tuner]

- The external tuner should be equipped with some kind of timer function. Using timer function of the tuner, set it to be turned on when it comes to the time you want to start recording, and off when it comes to the time you want to finish recording. (Refer to the tuner's manual on how to set the timer.)
- Make sure to turn off the external tuner when you finish setting.

[Preparation of this unit]

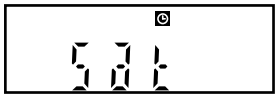
- Make sure to select the desired Recording mode beforehand.



1 In stop mode, press [HDD] then select the recording mode for HDD using [REC MODE].

2 Press [SAT.LINK].

- "Sat" will appear on the front panel display and the unit goes into the Satellite Link standby mode.



To cancel the Satellite Link function while in the Satellite Link standby mode:
Press **[I/⏻ ON/STANDBY]** or **[SAT.LINK]** to turn on the unit.

To cancel the Satellite Link function while the Satellite Link Recording is in progress:
Press **[■ STOP]** on the front panel of the unit, or press and hold **[STOP ■]** on the remote control for 2 seconds.

Note

- Recording picture will be distorted if the copy protection signal is being detected during Satellite Link Timer Recording.
- Pressing **[SAT.LINK]** does not work under the following circumstances:
  - Setup menus are displayed.

- Timer programming menu is displayed.
- Title list or any file list is displayed.

• When a regular Timer Recording and the Satellite Link Timer Recording are overlapped, the examples are given below.

	Example 1
Timer Recording	
Satellite Link	
Actual Recording	

	Example 2
Timer Recording	
Satellite Link	
Actual Recording	

	Example 3
Timer Recording	
Satellite Link	
Actual Recording	

Settings for External Equipment

Connection to External Equipment

HDD DVD-RW DVD-RW DVD-R DVD+RW DVD+R

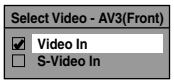
Connect the external equipment using either the input jacks, AV1, AV2 (Rear) or AV3 (Front). However, for AV3 jacks, you have to select S-VIDEO input or VIDEO input jacks depending on the connected devices.
Use a commercially available Scart, S-Video or Video cable and an Audio cable for this connection.

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Video" using [▲ / ▼], then press [ENTER/OK].

3 Select "Select Video" using [▲ / ▼], then press [ENTER/OK].

4 Select the input jack type to be used using [▲ / ▼], then press [ENTER/OK].



- If you want to use VIDEO input jack (Composite), select "Video In".
- If you want to use S-VIDEO input jack, select "S-Video In".

5 Press [SETUP] to exit.

Recording from External Equipment

HDD DVD-RW DVD-RW DVD-R DVD+RW DVD+R

Before recording from external equipment, see page 22 for connection instructions.

1 Turn the TV and the unit on, and select the input of the TV to which the unit is connected.

If you are recording to the HDD, press [HDD], then proceed to step 3.
If you are recording to a disc, press [DVD].

2 Press [OPEN/CLOSE ⏏] to open the disc tray, then place the disc to record on.
Press [OPEN/CLOSE ⏏] again to close the disc tray.

3 Select the input terminal to which the external equipment is connected (AV1, AV2, or AV3).

To use the input jacks on the rear of the unit, select "AV1" or "AV2" position by pressing **[INPUT SELECT ⊖]** or **[PROG. ∧ / ∨]**.
To use the input jacks on the front of this unit, select "AV3" position by pressing **[INPUT SELECT ⊖]** or **[PROG. ∧ / ∨]**.

4 Select a recording mode using [REC MODE]. (See page 33.)

5 Press [● REC] on the unit to start recording.

6 Press the [PLAY] button on the external recording component.

7 Press [■ STOP] on the unit to stop recording.

Note

- During recording, if a signal other than PAL is detected (such as NTSC), recording is paused.
- If you want to monitor the programme that you are recording, make sure the device such as a Satellite Box is powered off or press **[DISPLAY]** when it is connected to AV2.

Information on DV Dubbing

This function helps you to dub the contents in the DVC (digital video camcorder) to HDD or DVD easily. You can control basic operations of the DVC from the remote control of this unit if the DVC is in video mode.

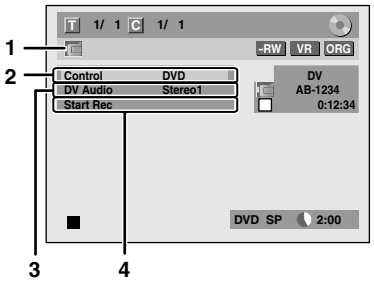
Guide to DV and On-Screen Display

1 Connect your DVC to the DV IN jack on the front panel using a DV cable. (Use the DV cable that has 4-pin input jack and is compliance with the IEEE 1394 standards.)

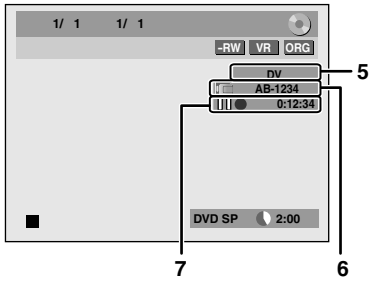
2 Press [INPUT SELECT ⊕] repeatedly to select the appropriate external input channel for DV IN (AV4).

3 Press [DISPLAY] to display the DVC information on the screen.

When the DVC is in video mode...



When the DVC is in camera mode...



The menu changes according to the mode of DVC. Switch the mode on the DVC to video mode for the dubbing information.

The following instructions are described with the operations using the remote control of this unit.

1 DV icon

2 Indicator of active device

- With “Control” highlighted, press **[ENTER/OK]** to display the available devices to control with the remote control of this unit. Select the device you wish to operate using **[▲ / ▼]**, then press **[ENTER/OK]**.
  - Select “HDD” / “DVD” to control this unit with the remote control of this unit.
  - Select “DVC” to control your DVC with the remote control of this unit.

3 Recording audio mode

- “DV Audio” can be changed. With “DV Audio” selected, press **[ENTER/OK]** to display “DV Audio” menu. Select the audio you wish to output using **[▲ / ▼]**, then press **[ENTER/OK]**.
  - Select “Stereo1” to dub the stereo sound.
  - Select “Stereo2” to dub the sound that was added after the recording.
  - Select “Mix” to dub the stereo1 and stereo2.

4 Command menu

- “Start Rec” or “Pause Rec” will appear.

5 External input channel

6 Product name of your DVC

- If the unit cannot recognise the input signal from the DVC or if it is the unknown product, “No Device” or “****” will appear instead.

7 Status of the current operation and the time counter

Each icon means (Available icons may vary depending on the DVC):

- DVC is in stop mode.
- DVC is in playback mode.
- DVC is in pause mode.
- DVC is fast forwarding. (standard speed)
- DVC is fast forwarding. (faster than above)
- DVC is fast forwarding. (faster than above)
- DVC is slow forwarding. (standard speed)
- DVC is slow forwarding. (faster than above)
- DVC is slow forwarding. (faster than above)
- DVC is fast forwarding. (in stop mode)
- DVC is fast reversing. (in stop mode)
- DVC is fast reversing. (standard speed)
- DVC is fast reversing. (faster than above)
- DVC is fast reversing. (faster than above)
- DVC is in slow reverse playback.
- DVC is in recording.
- DVC is in recording pause mode.

Please also read the operating instructions of your DVC for more information.

DVC to HDD / DVD Dubbing

HDD | Video DVD-RW | VR DVD-RW | DVD-R | DVD+RW | DVD+R

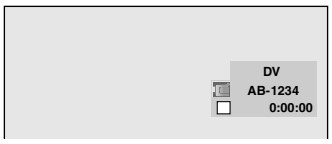
Before recording from DVC, see page 22 for connection instructions.

Preparing for DV dubbing (DVC to HDD):
- Make sure your DVC is in video mode.

Preparing for DV dubbing (DVC to DVD):
- Insert a recordable DVD.
- Make sure your DVC is in video mode.

If you are dubbing to the HDD, press [HDD] first.
If you are dubbing to a disc, press [DVD] first.

1 Select "DV" channel using [INPUT SELECT ⊕] or [PROG. ∧ / ∨].

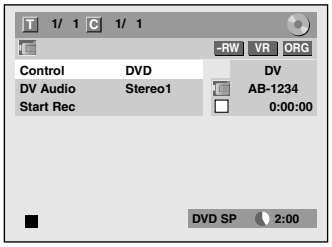


2 Press [REC MODE] to select a recording mode. (See page 33.)

3 Press [DISPLAY].

4 With "Control" highlighted, press [ENTER/OK] to display the available devices to control with the remote control of this unit. Select "DVC" using [▲ / ▼], then press [ENTER/OK].

e.g.) DVC to DVD dubbing



Now you can operate your DVC with the remote control of this unit.

5 Press [PLAY ►] to start playing back the DVC, and find the point where you wish to start dubbing. Press [STOP ■] when you come to the desired start point.

6 Select "Start Rec" using [▲ / ▼], then press [ENTER/OK].

The dubbing will start.

To stop dubbing;

1 Select "Control" using **[▲ / ▼]**, then press **[ENTER/OK]**.
2 Select "HDD" or "DVD" using **[▲ / ▼]** (whichever the recording component you are using), then press **[ENTER/OK]**.
3 Press **[STOP ■]**.

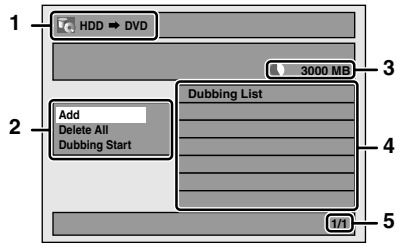
Note

- If you press **[PAUSE ❚❚]** at step **5**, the tape will rewind to the point a few seconds preceding the paused point when you press **[ENTER/OK]** at step **6**, then, it will start dubbing when it comes to the paused point.
- The unit does not send out the output signal to DVC.
- For the proper operation, connect DVC to the unit directly. Do not connect this unit and DVC via any other unit.
- Do not connect more than one DVC.
- The unit can only accept DVC. Other DV device such as cable/satellite box or D-VHS VCR cannot be recognised.
- If no video signal is detected from the DVC during DVC to HDD / DVD dubbing, the recording will be paused and "●" will flash on the TV screen. The recording will resume when the unit detects the video signal again.
- When the DVC is in camera mode, refer to "Guide to DV and On-Screen Display" on page 48.
- Date / time and cassette memory data will not be recorded.
- Pictures with a copy-guard signal cannot be recorded.
- A DV terminal is a terminal that can use the transmission mode conforming to the IEEE 1394 standards called "Fire Wire". It serves as the interface that connects the PC and peripheral device such as "i.Link" (registered trademark of SONY). It enables digital dubbing between DV devices with little degradation.
- You cannot dub from DVC to the both HDD and DVD at the same time.

Information on Dubbing

You can dub the contents of the HDD to DVD or vice verse. Before you start dubbing, refer to page 33 to see the recording compatibility.

Guide to Dubbing Menu Display



1 Dubbing direction
2 Dubbing menu
3 Remaining recordable space
4 Dubbing list
5 Current page number / total number of pages

Recording Mode for Dubbing

"High"
This unit is compatible with the high speed dubbing from HDD to DVD or VR mode DVD-RW disc to HDD. High speed dubbing offers you the dubbing speed of 32 times the SLP mode dubbing. To perform the high speed dubbing, set the recording mode to "High".

- Duration of high speed dubbing will vary depending on the recording mode or the title amount.
- High speed dubbing is not available when;
  - recording mode is set to other than "High".
  - dubbing from a video mode DVD –RW/-R or DVD+RW/+R disc to the HDD.
  - there is not enough space in the disc.
  - dubbing a title which last more than 4 hours to DVD+RW / +R discs.
  - dubbing a title which last more than 8 hours to DVD-RW / -R discs.
  - dubbing a title recorded in EP or SLP mode to DVD+RW / +R discs.
- During dubbing, you only can use **[■ STOP]** on the front panel, and any other buttons will be invalid.
- High speed dubbing of a HDD title which has bilingual audio is only available to VR mode DVD-RW disc.

"Auto"
When "Auto" is selected as a recording mode, the unit calculates how much time is available on the disc and selects the best recording mode available automatically.

- The recording may be cut short when the available recording space of the disc is too limited.

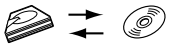
Note

- During normal dubbing, you can watch the playback picture of the title being dubbed (the audio cannot be changed). During high speed dubbing, however, the playback picture will not appear.
- When you dub a HDD title that has bilingual audio to Video mode DVD-RW / -R or DVD+RW / +R disc, select an appropriate audio format in the "Bilingual Recording Audio" menu. Refer to "Setting Bilingual Recording Audio" on page 38.
- Dubbing of a copy-once programmes are only available when you dub HDD to DVD-RW disc with Content Protection for Recordable Media (CPRM) formatted in VR mode, and in this case, the programmes does not remain on the HDD.
- In order to dub a DVD recorded with the NTSC, set the "TV System" to "PAL". Refer to "**9.** TV System" on page 83.
- If you stop the dubbing halfway, the contents will be dubbed up to the point where you stop the dubbing (except for the high speed dubbing). With high speed dubbing, nothing will be dubbed if you stop it halfway.
- To stop the dubbing in progress, press **[■ STOP]** on the front panel. If you stop the high speed dubbing, confirmation message appears. Select "Yes" using **[▲ / ▼]**, then press **[ENTER/OK]** to proceed.

Other recording modes
Refer to page 34 for the information on other recording modes.

Selected Title Dubbing

HDD DVD-RW DVD-RW DVD-R DVD+RW DVD+R

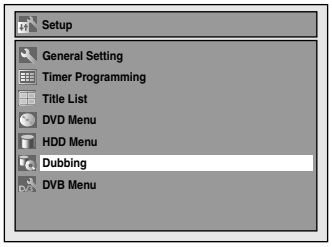


Preparing for dubbing (HDD to DVD):
• Insert a recordable DVD.

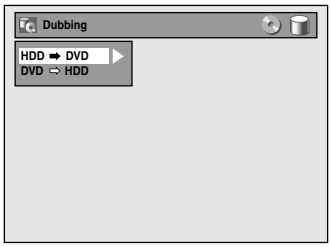
Preparing for dubbing (DVD to HDD):
• Insert a disc to be dubbed.

1 Press [SETUP] in stop mode.

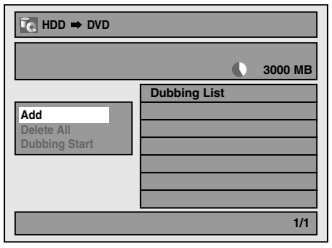
2 Select "Dubbing" using [▲ / ▼], then press [ENTER/OK].



3 <u>HDD ➡ DVD</u>
Select "HDD ➡ DVD" using [▲ / ▼], then press [ENTER/OK].
<u>DVD ➡ HDD</u>
Select "DVD ➡ HDD" using [▲ / ▼], then press [ENTER/OK].
e.g.) HDD ➡ DVD

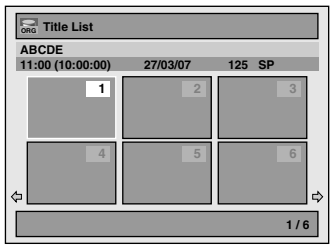


4 Select "Add" using [▲ / ▼], then press [ENTER/OK].



• If you have registered any dubbing before, they will be listed in the dubbing title list.

5 Select a desired title using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].
e.g.) HDD



The title is now registered in the dubbing list.

6 Repeat steps 4 to 5 until you register all the titles to be dubbed.

To delete a title:

1 Go to the dubbing list, then select a title using **[▲ / ▼]**. Then press **[ENTER/OK]**.
2 Select "Delete" using **[▲ / ▼]**, then press **[ENTER/OK]**.
3 Select "Yes" using **[▲ / ▼]**, then press **[ENTER/OK]**.

To move a title:

1 Go to the dubbing list, then select a title using **[▲ / ▼]**. Then press **[ENTER/OK]**.
2 Select "Move" using **[▲ / ▼]**, then press **[ENTER/OK]**.
3 Select a desired insert point using **[▲ / ▼]**, then press **[ENTER/OK]**.

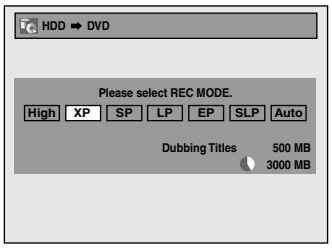
To erase all the titles in the dubbing title list:

1 Select "Delete All" in the dubbing menu using **[▲ / ▼]**, then press **[ENTER/OK]**.
2 Select "Yes" using **[▲ / ▼]**, then press **[ENTER/OK]**. Final confirmation message will appear.
3 Select "Yes" using **[▲ / ▼]**, then press **[ENTER/OK]**.

• To go back and forth between dubbing menu and dubbing list, use **[◀ / ▶]**.

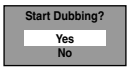
7 After adding all the titles you want, select "Dubbing Start" in the dubbing menu using [▲ / ▼], then press [ENTER/OK].

8 Select a desired recording mode using [◀ / ▶], then press [ENTER/OK].



Confirmation message will appear.
- Depending on the dubbing direction, the available recording mode varies.
- When dubbing from HDD to DVD, you can select "High" to perform the high speed dubbing (refer to "Recording Mode for Dubbing" on page 50 for more details).

9 Select "Yes" using [▲ / ▼], then press [ENTER/OK].



Dubbing will start.
- It may take awhile to prepare for the dubbing.

To stop the dubbing in progress:
Press **[■ STOP]** on the front panel.

One-touch Dubbing...
With one-touch dubbing, you can start dubbing right away with just one touch.
To dub the contents in a DVD which is finalised on other unit, use this function.

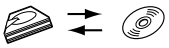
During playback of the title you want to dub, press [DUBBING].
If you are playing back a DVD, DVD to HDD dubbing will start right away.
If you are playing back HDD, HDD to DVD dubbing will start right away.
- The dubbing will start from the beginning of the title being played back.
- The unit will dub only the title being played back.
- When dubbing from HDD to DVD, recording mode will automatically be set to "High" whenever the conditions are met. (See page 50.) Otherwise, the last selected recording mode will automatically be applied.

To stop the dubbing in progress:
Press **[■ STOP]** on the front panel.

One Title Dubbing

HDD | Video DVD-RW | VR DVD-RW | DVD-R | DVD+RW | DVD+R

This function lets you select one specific title from the title list for dubbing.



Preparing for dubbing:
- Insert a recordable DVD.

If you are dubbing a title in the HDD, press [HDD] first.

If you are dubbing a title in a disc, press [DVD] first.

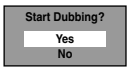
1 Press [TOP MENU].

2 Select a desired title to dub using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].

3 Select "Dubbing" using [▲ / ▼], then press [ENTER/OK].

e.g.) HDD Playlist

4 Select "Yes" using [▲ / ▼], then press [ENTER/OK].



Dubbing of the selected title will start.
To stop the dubbing in progress:
Press **[■ STOP]** on the front panel.

Setting a Disc to Protect

DVD-RW (VR) DVD+RW DVD+R

To prevent accidental over-recording, editing or erasing of recordings, you can protect them using the Setup menu.

Insert a recordable disc.

1 In stop mode, press [SETUP].

2 Select "DVD Menu" using [▲ / ▼], then press [ENTER/OK].

3 Select "Disc Protect OFF ➡ ON" using [▲ / ▼], then press [ENTER/OK].

4 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

The disc is protected.

5 Press [SETUP] to exit.

Note

- The Disc Protect setting is available only when a disc recorded in VR or +VR mode is inserted.
- You can select only "Disc Protect ON ➡ OFF" when a protected disc is inserted.

To cancel the disc protect:

- Select "Disc Protect ON ➡ OFF" at step **3**, then select "Yes".
- If you insert a disc protected with this unit, "Disc Protect ON ➡ OFF" will appear instead of "OFF ➡ ON".

Finalising Discs

Video DVD-RW (VR) DVD-RW DVD-R DVD+RW DVD+R

You will need to finalise discs to play them back in other units.
Finalising may take from several minutes up to an hour.
A shorter recording period on the disc will require a longer time period for finalisation. Do not unplug the mains cable during finalisation.

Insert a recordable disc before finalising.

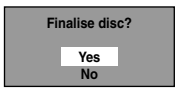
1 In stop mode, press [SETUP].

2 Select "DVD Menu" using [▲ / ▼], then press [ENTER/OK].

3 Select "Finalise" using [▲ / ▼], then press [ENTER/OK].

4 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

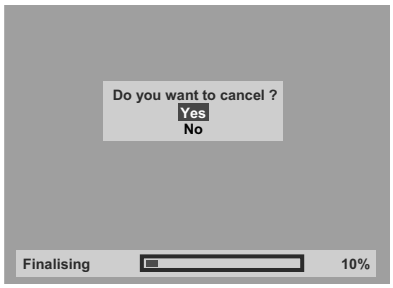
e.g.) VR mode DVD-RW disc



Finalising will start.

To cancel finalising (DVD-RW disc only):

At step **4**, press **[STOP ■]**. Select "Yes" using **[▲ / ▼]**, then press **[ENTER/OK]**. Finalising is cancelled and the unit switches to stop mode.



If ⃠ appears when **[STOP ■]** is pressed, you cannot cancel finalising because the finalising has already reached at a critical point in its process.

If "No" is selected and **[ENTER/OK]** or **[RETURN/BACK]** is pressed, finalising is continued.

You cannot cancel finalising a DVD-R and DVD+RW/+R disc once it has started.

5 Finalising is complete.

Hint

- Finalising a disc in Video mode and +VR mode automatically creates a Title menu.
- After you finalise the DVD+RW disc, you can call up the title list by pressing **[TOP MENU]**, or you can call up the Title menu by pressing **[DISC MENU]**.
- Even after DVD+RW disc is finalised, you can still record or edit. After you finalise DVD-RW/-R or DVD+R disc, you cannot edit or record anything else on that disc.
- To release the finalisation of the disc, select “Undo Finalise” at step **3**.
- To release the finalisation of the DVD+RW disc, make an additional recording to the disc.
- For DVD+RW disc, if you have added or deleted chapters, or made chapters hidden, you must finalise the disc before being able to see those effects on other units. To play back discs other than DVD+RW disc on other DVD players, you will need to finalise.

Note

- If you insert a DVD-RW disc finalised with this unit, “Undo Finalise” will appear instead of “Finalise”.
- DO NOT power off during finalising. This may result in a malfunction.

Auto Finalise

DVD-RW (Video) DVD-R DVD+R

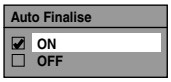
You can finalise discs automatically when the disc space runs out if you set this in the Setup menu.

1 In stop mode, press [SETUP]. Select “General Setting” using [▲ / ▼], then press [ENTER/OK].

2 Select “Recording” using [▲ / ▼], then press [ENTER/OK].

3 Select “Auto Finalise” using [▲ / ▼], then press [ENTER/OK].

4 Select “ON” using [▲ / ▼], then press [ENTER/OK].



5 Press [SETUP] to exit.

Note

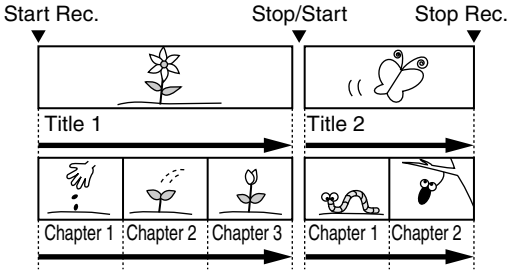
- Auto finalise function is not available for discs formatted in VR mode.

Playback

Basic Playback

Hint for HDD / DVD Playback

The contents of a HDD / DVD are generally divided into titles. Titles are sometimes further subdivided into chapters.



Playing Back a HDD / DVD-RW / DVD-R / DVD+RW / DVD+R Disc

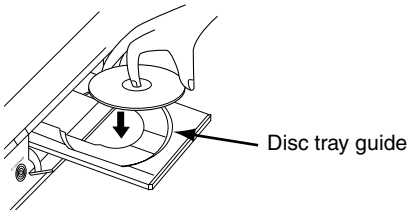
HDD DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R

1 Press [I/⏻ ON/STANDBY] to turn on the unit.

Turn on the TV and be sure to select the input to which the unit is connected.
If you are playing back the titles in HDD, press **[HDD]** first, then proceed to step **5**.
If you are playing back the titles in DVD, press **[DVD]** first.

2 Press [OPEN/CLOSE ⏏] to open the disc tray.

3 Place the disc on the disc tray with its label facing up. Be sure to align the disc with the disc tray guide.



4 Press [OPEN/CLOSE ⏏] to close the disc tray.

5 Press [TOP MENU] to display the Title list.

You can switch between the “Original” and “Playlist” in the HDD or VR mode DVD-RW disc using **[DISC MENU]**.

6 Select the desired title using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].

Pop up window will appear.

7 Select “Play From Start” using [▲ / ▼], then press [ENTER/OK].

Playback will start.
For title in the HDD, you can also select “Resume Playback” to play from the resume points.

8 Press [STOP ■] to stop playback.

To eject the disc, press **[OPEN/CLOSE ⏏]** to open the disc tray, then remove the disc. Press **[OPEN/CLOSE ⏏]** to close the disc tray before turning off the unit.

Hint

- For DVD-R (Video mode), DVD-RW (Video mode) and DVD+R discs that are already finalised, a Title menu will be displayed instead of thumbnails.
- After you finalise the DVD+RW, you can call up the Title list by pressing **[TOP MENU]**, or you can call up the title menu by pressing **[DISC MENU]**.
- You can resume playback from where you stopped playing back the disc (Resume playback). See page 61 for details.
- You can also start playback by pressing **[PLAY ▶]** instead of **[ENTER/OK]** at step **7**.

Note

- Some discs may start playback automatically.

Playing Back a DVD-V / Video CD (without PBC Function)

DVD-V VCD

1 Follow steps 1 to 4 in “Playing Back a HDD / DVD-RW / DVD-R / DVD+RW / DVD+R Disc”.

2 Press [PLAY ▶] to start playback.

Playback will start.

If you are playing back a DVD-Video, a menu may appear.
See pages 59 - 60 for details.

3 Press [STOP ■] to stop playback.

Note

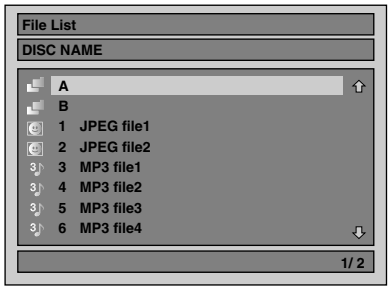
- Some discs may start playback automatically.
- For playing back a Video CD with PBC function, see page 60.

Playing Back an Audio CD, MP3 or JPEG

CD MP3 JPEG

1 Follow steps 1 to 4 in "Playing Back a HDD / DVD-RW / DVD-R / DVD+RW / DVD+R Disc" on page 55.

The File List will appear.



To exit the File List, press **[TOP MENU]** or press **[STOP ■]**.
To resume the File List, press **[TOP MENU]**.

2 Press [▲ / ▼] to select the desired folder or track / file, then press [ENTER/OK].

If a track / file is selected:
Playback will start.

If a folder is selected:
The files in the folder will appear.
Press **[▲ / ▼]** to select the folder you want, then press **[ENTER/OK]**.
- Press **[PLAY ►]**, **[ENTER/OK]** or **[►]** to move to any lower folders.
- Press **[◄]** or **[RETURN/BACK]** to move back to the folder above.

Hints for Audio CD tracks and MP3 / JPEG files:
- Folders are shown with the icon.
- Audio CD tracks are shown by .
- MP3 files are shown with the icon. Playback will start from the selected track and continue with each one after.
- JPEG files are shown with the icon.
- The unit can recognise up to 255 folders and up to 99 tracks / 999 files.
- Letters of a file / folder name overflowing the given space will be displayed as "...".
- Unplayable folders and tracks / files may be displayed depending on the recording conditions.
- For MP3 file recorded in Variable Bit Rate (VBR), the unit may not display the actual elapsed time.
- If there are no files in the folder, "No Files" is displayed.
- High resolution or large-size JPEG files take a few moments to be displayed.
- It is not possible to play back progressive JPEGs (JPEG files saved in progressive format) on this unit.
- It is not possible to play back JPEG files of 12 MB or more.

It is recommended that files to be played back in this unit are recorded under the following specifications:

[MP3]
- Sampling frequency : 44.1 kHz or 48 kHz
- Constant Bit Rate : 112 kbps to 320 kbps

[JPEG] Size of picture
- Upper limit : 6,300 x 5,100 dots
- Lower limit : 32 x 32 dots
- Capacity limit : less than 12 MB

Note
- MP3 files cannot be recorded as digital sound using an MD or DAT deck.
- Files with extensions other than ".mp3 (MP3)" or ".jpg / .jpeg (JPEG)" will not be listed in the File List.
- Some folders or tracks listed in the File List may be unplayable due to their recording status.
- The File List displays only up to 8 folders and file names.

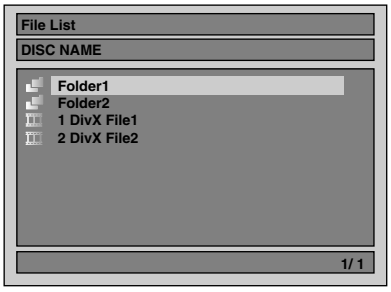
Notes on JPEG:
After file is displayed for 5 seconds or 10 seconds (set in the "Slide Show" on page 67), the display moves to the next file.
During JPEG playback, press **[►]** or **[◄]** to rotate a picture 90 degrees clockwise or counterclockwise respectively. (Not available when the display menu appears.)

Playing Back a DivX®

DivX®

1 Follow steps 1 to 4 in "Playing Back a HDD / DVD-RW / DVD-R / DVD+RW / DVD+R Disc" on page 55.

The File List will appear.



To exit the File List, press **[TOP MENU]** or press **[STOP ■]**.
To resume the File List, press **[TOP MENU]**.

2 Press [▲ / ▼] to select the desired folder or file, then press [ENTER/OK].

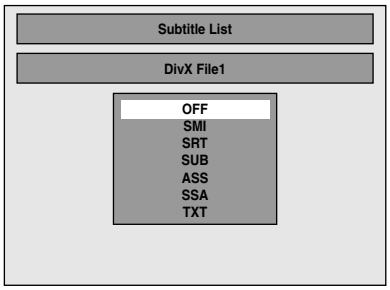
If a file is selected:
Playback will start.

If a folder is selected:
The files in the folder will appear.
Press **[▲ / ▼]** to select the file or folder you want, then press **[ENTER/OK]**.
- Press **[PLAY ►]**, **[ENTER/OK]** or **[►]** to move to any lower folders.
- Press **[◄]** or **[RETURN/BACK]** to move back to the folder above.

DivX® Subtitle

The subtitle created by the user can be displayed during DivX® playback.

1 After the DivX® file is selected, the Subtitle List will appear.



2 Select the desired extension you want to display using [▲ / ▼], then press [ENTER/OK]. DivX® with the subtitle starts playback. The subtitle cannot be displayed when the setting is "OFF".

- If there is more than one extension, the extension selection will appear in the Subtitle List.

Note

- "DivX Subtitle" must be activated in the DivX Menu. (Refer to "DivX Subtitle" on page 85.)
- Playback file and the subtitle file must have the same name.
- Playback file and the subtitle file must locate in the same folder.
- Only the subtitle files with the following extensions are supported; .smi (.SMI), .srt (.SRT), .sub (.SUB), .ass (.ASS), .ssa (.SSA), .txt (.TXT). (.sub (.SUB) and .txt (.TXT) files may not be recognised.)
- The subtitles that exceed the playback time of the DivX® file will not be displayed.

DivX® VOD

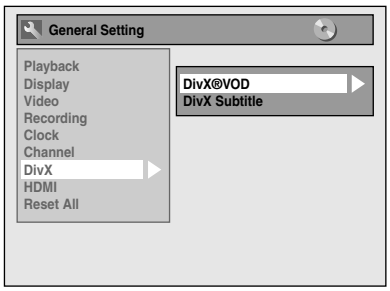
This unit allows you to play back the files purchased or rented from DivX® Video-On-Demand (VOD) services. The files are available on the internet. When you purchase or rent DivX® VOD files on the internet, you will be asked to enter a registration code. This menu item provides you with the registration code.

1 Press [SETUP].

2 Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

3 Select "DivX" using [▲ / ▼], then press [ENTER/OK].

4 Select "DivX® VOD" using [▲ / ▼], then press [ENTER/OK].



Your registration code will appear.

Note

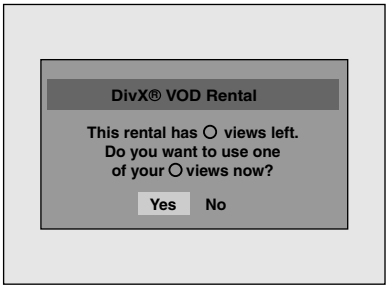
- One registration code is only valid for one DivX® VOD file.
- You must first download the file from the internet and play it back on this unit before you are able to get another code.
- You must follow this step every time you purchase or rent a DivX® VOD file from the internet.
- For more information for DivX®, please visit http://www.divx.com/vod.

It is recommended that files to be played back in this unit are recorded under the following specifications:

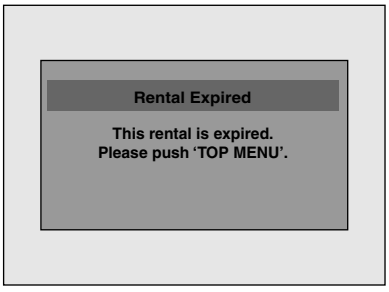
[DivX®]
- Official DivX® Certified product
- Playable Codec of AVI files : DivX®3.x, DivX®4.x, DivX®5.x, DivX®6.x
- Maximum size of image : 720 x 480 @30 fps, 720 x 576 @25 fps
- Sampling frequency of audio : 8 kHz - 48 kHz
- Audio type : MPEG1 audio layer 3 (MP3), MPEG1 audio layer 2, Dolby Digital

Hint for the purchased or rental official DivX® Certified product
- When you purchased or rental a DivX® file through the official site of DivX® Video which is called DivX® Video-On-Demand (VOD) services, a registration code is required every time you get the new file from the DivX® VOD services. Refer to “DivX® VOD” on page 57.
- Some DivX® VOD files are restricted with the limited playable times (you cannot play them back beyond the limit). If your DivX® VOD file has such limit, the playback confirmation screen will appear.

  Use **[◀ / ▶]** to select “Yes” if you want to play back the file, or to select “No” if you do not wish to play it back. Then press **[ENTER/OK]** to confirm the selection.



- You cannot play back the DivX® VOD files of which rental period has been expired. In such case, press **[TOP MENU]** and select other files that can be played back.



Hint
- DivX® is a codec (compression/decompression) that can compress images to a very small amount of data. The software can compress video data from almost any sources to the size that can be sent on the Internet without compromising visual quality of the images.
- A file with an extension of “.avi” and “.divx” is called an DivX® file. All files with the “.avi” extension are recognised as MPEG4.
- Files whose extension other than “.avi” and “.divx” will not be listed on the DivX® menu. However, unplayable groups or tracks may be displayed, depending on the recording conditions.
- Even if the file has an extension of either “.avi” and “.divx”, this unit cannot play it back if it is recorded in the format other than DivX®.
- Folders are known as Groups; files are known as tracks.
- A symbol of is shown on the top of the file name.
- A maximum of 255 folders or 999 files may be recognised in one disc.
- Up to 8 hierarchies can be recognised in one folder. Files in the 9th or deeper hierarchies cannot be played back.
- If the track extends beyond the scope of screen, a down arrow “⇩” appears, indicating that the user can view another part on the next page. The current page number and the number of total pages are shown on the right of the down arrow “⇩”.
- Letters of a file / folder name overflowing the given space will be displayed as “...”.
- You can play back the disc recorded in multi-session.
- It may take awhile for audio and images to be output after you inserted a disc and pressed **[PLAY ▶]**.
- When playing back the files recorded in high bit rates, the images can be interrupted in some occasions.
- Although DivX® logo has been obtained for this unit, it may not be able to play back some data, depending on the characteristics, bit rates, or audio format settings, etc.
- Use the software recognised by the DivX, Inc. when you make DivX® files.
- A DivX® file whose file size exceeds 2 GB cannot be played back.
- If you try to play back the DivX® file that has the screen resolution which this unit does not support, the playback will be stopped and error message will appear.
- If a large-sized DivX® file is selected, it may take awhile to start the playback (over 20 seconds sometimes).
- If DivX® files written on CD discs cannot be played back, rewrite them on a DVD disc and try to play back.
- For more information for DivX®, please visit http://www.divx.com.

- If you insert a CD-RW/-R with DivX® files that are mixed with MP3 and JPEG files, the Playback Media Selection screen will be displayed. Please select “Video” and proceed to next step.

- Press **[DISC MENU]** to call up the Playback Media Selection screen in stop mode.
- If you select “Audio & Picture” instead of “Video” on the Playback Media Selection screen, this unit can play back MP3/JPEG files.
- You cannot play back the DivX® VOD files obtained with different registration codes on this unit. Press **[TOP MENU]** and select other files that can be played back.
- This unit does not support the DivX® file with UDF format.

Playing Back Discs Using the Disc Menu

DVD-V

A DVD contains a disc menu, which lists the contents and enables you to customise playback. The menu may offer choices for subtitle languages, special features, and chapter selection. Usually this information appears automatically when you start playback, but sometimes you need to press **[DISC MENU]** to display the menu.

1 Press [DISC MENU].

If the feature is not available, ⃠ may appear on the TV screen.

2 Select an item using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].

Repeat this step until all the features you want are set up or to start playing back the disc from the menu. The following operations are available.

[DISC MENU] button:
Displays the disc menu, which will vary among discs, and may be same with the Title menu.

[▲ / ▼ / ◀ / ▶] buttons:
Move the cursor from item to item on the screen.

[ENTER/OK] button:
Selects the currently highlighted menu option.

[the Number buttons]:
Selects a numbered menu option (available on certain discs).

3 Press [DISC MENU] to exit the disc menu.

Note

- Menus vary among discs. Refer to the information accompanying the disc for details.

Playing Back a Disc Using the Title Menu

DVD-V DVD-RW DVD-R DVD+RW DVD+R

Some DVDs have a Title menu, which lists the titles available on the DVD. You can start playing back such discs at a specific title.

On this unit, if you finalise video mode or +VR mode discs, a Title menu will be created automatically.

1 Press [TOP MENU].

The Title menu will appear.

- For some discs, the Title menu appears automatically.

If the feature is not available, ⊘ may appear on the TV screen.

2 Select a desired item using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].

The disc will start playing back at the title you selected. The following operations are available.

[TOP MENU] button:
Displays the DVD "Title Menu" which will vary between discs.

[▲ / ▼ / ◀ / ▶] buttons:
Move the cursor from item to item on the screen.

[ENTER/OK] button:
Selects the currently highlighted menu option.

[the Number buttons]:
Selects a numbered menu option (available on certain discs).

3 Press [TOP MENU] to exit.

Note

- **[TOP MENU]** will not be available for some DVDs.
- Menus vary among discs. Refer to the information accompanying the disc for details.
- For DVD+RW discs finalised on this unit, press **[DISC MENU]** to display the Title menu.

PBC Function for Video CDs

VCD

This unit conforms to ver.1.1 and ver.2.0 of the Video CD standard playback control (PBC) function. This enables you to play back interactive software using menu screens. Refer to the information accompanying the Video CD.
Ver.1.1 (without PBC function): You can still enjoy playback of pictures and music from the CD.
Ver.2.0 (with PBC function): "Pbc" will appear on the screen and display when playing back a Video CD with the PBC function.

Hint

- When playing back Video CDs with the PBC function, "Pbc" is displayed instead of the playing back time and current track indications on the front panel display.

Note

- Some operations cannot be performed unless the function is cancelled either automatically or intentionally by you.
- Operations that are not available when the PBC function is set to "ON" are indicated by the following symbol in this manual:

VCD
(PBC OFF)

Playing Back a Video CD Using the Title Menu

VCD

1 When playing back a Video CD with the PBC function, the Title menu will appear automatically.

2 Press [the Number buttons] to select the desired title.

Playback will start at the selected title.

3 Press [RETURN/BACK] to go back to the Title menu.

Note

- While the On-Screen Display appears, you cannot perform steps **2** and **3**.

Cancelling and Recalling the PBC Function

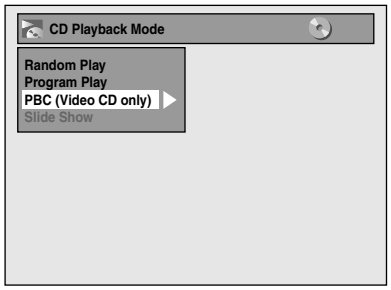
VCD (PBC OFF)

Insert a Video CD.

1 In stop mode, press [SETUP].

2 Select "CD Playback Mode" using [▲ / ▼], then press [ENTER/OK].

3 Select "PBC (Video CD only)" using [▲ / ▼], then press [ENTER/OK].



4 Select "OFF" using [▲ / ▼], then press [ENTER/OK].

5 Press [SETUP] to exit.

To recall the PBC function, select "ON" at step **4** above.

Note

- The default setting of "PBC (Video CD only)" is "ON".

Special Playback

Resume Playback

HDD DVD-V DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R CD VCD (PBC OFF) MP3 JPEG DivX®

You can resume playback from the point where you stopped it before.

1 During playback, press [STOP ■].

The resume message will appear.

2 Press [PLAY ►].

In a few seconds, playback will resume from the point at which you stopped it before. Even if you turn off the unit, you can resume playback at the same point after turning back on the unit.
For title in the HDD, you can also play from the resume point by selecting "Resume Playback" at step **7** of "Playing Back a HDD / DVD-RW / DVD-R / DVD+RW / DVD+R Disc" on page 55.

To cancel the resume playback and start playing back the disc from the beginning:
Press **[STOP ■]** while playback is stopped.

For HDD:
You can set a resume point per every title.

For DVD-Videos, DVD+RW/+R, DVD-RW/-R, Video CD, Audio CD, MP3 files, JPEG files, and DivX® files:
You can set only one resume point per disc.

Note

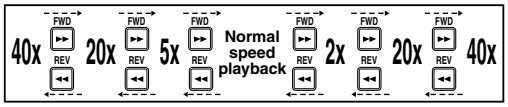
- For Video CDs, if you turn PBC on using the Setup menu, the resume function is cancelled.
- For MP3 and JPEG files, playback will resume from the beginning of the track at which playback was stopped.

Fast Forward / Fast Reverse

HDD DVD-V DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R CD VCD MP3 DivX®

1 During playback, press [FWD ►►] or [REV ◄◄].

Each time you press **[FWD ►►]** or **[REV ◄◄]**, the approximate speed will change as follows.
Fast forward or fast reverse playback across titles (for DVDs) or tracks / files (for Video CD / MP3 / DivX®) is not possible.



- For Audio CDs and MP3 files approximate speed is fixed at x8 with sound.
- For Video CDs, approximate forward / reverse speeds are x2, x8 and x16.
- For DivX® files, approximate forward speeds are x2, x20 and x40, and approximate reverse speeds are x5, x20 and x40.
- To return to playback at normal speed, press **[PLAY ►]**.
- Picture quality of DivX® files in fast reverse is lower than that in fast forward.
- For some DivX® files, Fast forward/Fast reverse may not function.

Hint

- Forward / reverse speeds are indicated with icons as follows.
  Forward (Approx. Speed):
  2x: ►►
  20x: ►►►
  40x: ►►►►
  Reverse (Approx. Speed):
  5x: ◄
  20x: ◄◄
  40x: ◄◄◄◄

Variable Skip / Variable Replay

HDD DVD-V DVD+RW DVD+R
Video DVD-RW VR DVD-RW DVD-R

During playback, you can skip forward or backward by the amount of time you set in “Playback” menu. To set the time amount, refer to “**8.** Variable Skip / Replay” on page 83.
During playback, press [VARIABLE SKIP] if you want to skip forward. Press [VARIABLE REPLAY] if you want to skip backward.

Pause

HDD DVD-V Video DVD-RW VR DVD-RW
DVD-R DVD+RW DVD+R CD VCD
MP3 JPEG DivX®

1 During playback, press [PAUSE ❚❚].

Playback will pause with the sound muted.

2 Press [PLAY ►] to resume playback.

Rapid Playback

HDD DVD-V Video DVD-RW VR DVD-RW
DVD-R DVD+RW DVD+R

Rapid Play function is available only during playback.

Available only on discs recorded in the Dolby Digital format, Rapid Play plays back in a slightly faster/ slower speed while keeping the sound quality just as normal playback.

1 During playback, press [1.3x/0.8x PLAY].

►x0.8 : Press **[1.3x/0.8x PLAY]** once during playback.
Plays back approximately at 0.8 times of normal playback.
►x1.3 : Press **[1.3x/0.8x PLAY]** twice during playback.
: Plays back approximately at 1.3 times of normal playback.
► : Press **[1.3x/0.8x PLAY]** thrice to play back in normal speed.
: No effects.

2 Press [PLAY ►] to continue the normal playback.

Note

- Audio (language) setting cannot be changed while using this mode.
- This feature may not work at some point in a disc.
- Audio is PCM during Rapid play mode.
- When you select “PAL” in “TV System” (see page 83), this function is not available with discs recorded using the NTSC system.

Step by Step Playback

HDD DVD-V Video DVD-RW VR DVD-RW
DVD-R DVD+RW DVD+R VCD DivX®

1 During playback, press [PAUSE ❚❚].

2 Press [SKIP ◄◄ / ►►] repeatedly.

Each time you press **[SKIP ►►]**, playback will go forward one frame (or step) at a time with the sound muted.
To go backward one frame (or step), press **[SKIP ◄◄]**.

Press and hold **[SKIP ►►]** to continue going forward.
To continue going backward, press and hold **[SKIP ◄◄]**.

3 Press [PLAY ►] to resume playback.

Note

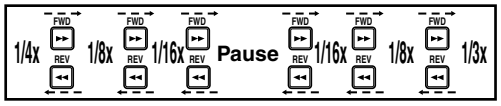
- Only step by step forward is available when playing back Video CDs and discs with DivX® files.

Slow Forward / Slow Reverse Playback

HDD DVD-V DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R VCD DivX®

1 During playback, press [PAUSE ❚❚], then press [FWD ▶▶] or [REV ◀◀].

Each time you press **[FWD ▶▶]** or **[REV ◀◀]**, the approximate speed change as follows.
(The sound will remain muted.)



To return to normal playback, press **[PLAY ▶]**.

Hint

- Forward / reverse speeds are indicated with icons as follows.
  Forward (Approx. Speed):
  1/16x: ▮▶▸
  1/8x: ▮▶▸▸
  1/3x: ▮▶▸▸▸
  Reverse (Approx. Speed):
  1/16x: ▮▶◂
  1/8x: ▮▶◂◂
  1/4x: ▮▶◂◂◂

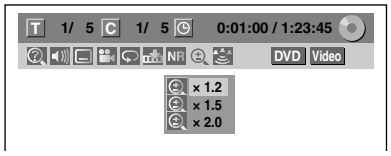
Note

- For some DivX® files, Slow forward may not function.
- Only slow forward is available when playing back Video CDs and discs with DivX® files.

Zoom

HDD DVD-V DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R VCD JPEG DivX®

1 During playback, press [ZOOM].



Four options are available, “x1.0”, “x1.2”, “x1.5” and “x2.0”. These are displayed excluding the current zoom rate.

Hint

- You can also select the zoom function by pressing **[DISPLAY]**. In this case, press **[DISPLAY]** first, select the icon using **[◀ / ▶]**, and then press **[ENTER/OK]** within 1 second, or wait for 1 second to display the selection menu.

2 Select the desired zoom factor to zoom using [▲ / ▼], then press [ENTER/OK].

The zoom area is displayed.

3 Select the desired zoom position using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].

Zoom playback will start.

Hint

- To exit the zoom menu, press **[ZOOM]** at step 1.
- To cancel the zoom function, select “x1.0” using **[▲ / ▼]**, then press **[ENTER/OK]**.

Note

- If selecting a smaller factor than that currently selected, the zoom area is not displayed.
- You cannot slide the zoomed picture on some JPEG files.

Marker Setup

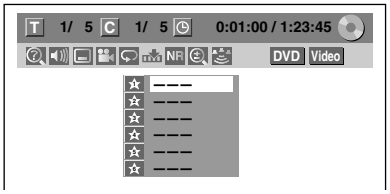
HDD DVD-V DVD-RW (Video) DVD-RW (VR) DVD-R DVD+RW DVD+R CD VCD (PBC OFF)

You can assign a specific point on a disc to return later.

1 During playback, press [DISPLAY].

2 Select the icon using [◀ / ▶], then press [ENTER/OK] within 1 second, or wait for 1 second to display the marker list.

Marker setup menu for DVD-Video



3 Select the desired marker number using [▲ / ▼]. When the disc reaches the desired point, press [ENTER/OK].

The title (track) number and the time are displayed.

4 To return to the marker, select the desired marker number using [▲ / ▼], then press [ENTER/OK].

Hint

- To clear a marker, select the marker number you wish to clear, then press **[CLEAR]**.
- You can mark up to 6 points.

Note

- All markers are erased when you perform the following operations.
  - Opening the disc tray (CD/DVD only)
  - Turning off the power (CD/DVD only)
  - Make additional recording on the disc (DVD only)
  - Editing any title (DVD only)
  - Dividing the title (HDD only)
  - Deleting a scene of the title (HDD only)
  - Change the mode between Original and Playlist. (VR mode DVD-RW disc only)
- Marker setting is not available when you play back the video CD with PBC function.

Chasing Playback during Recording

You can play back a title being recorded from the beginning while recording continues.

1 During recording, press [PLAY ►].

Playback of the title you are recording will start from the beginning.

- Elapsed playback time will be displayed in the front panel display.

2 To stop the playback, press [STOP ■] once.

The front panel display will switch back to show the elapsed recording time.
If you press **[STOP ■]** twice, it will stop the recording.

Using the [TIME SLIP] button

With **[TIME SLIP]** button, even if you leave your couch while you are watching TV through this unit, you can come back and watch the rest of the programme from right where you left at any convenient time with just one button.

1 When you leave the TV, press [TIME SLIP] twice. (When you are recording the TV programme to HDD, press once.)

Unless the unit is in HDD recording mode, the unit will start recording the TV broadcast with the first press. With the second press, or the first press when the unit is in HDD recording mode, the image will be paused while the recording continues. (It is as if you have paused the live TV broadcast.)

2 When you come back, press [TIME SLIP] again.

The pause will be cancelled, and the playback will start from the point where the image is paused in step **1**.

- While viewing the recorded content, you can pause and resume the playback by pressing **[TIME SLIP]**.

3 Press [STOP ■] once to resume live TV.
Press [STOP ■] twice to stop the recording.

Note

- **[TIME SLIP]** is not available during DVD recordings.
- If you press **[TIME SLIP]** when the unit is in DVD mode, the output mode will automatically be switched to HDD, and the unit will start the chasing playback of the title being recorded.
- You can also use the special playback functions such as **[REV ◄◄]**, **[FWD ►►]** etc. during chasing playback mode.
- The programs you recorded with **[TIME SLIP]** will be stored in the title list.
- **[REC ●]** is invalid during chasing playback.
- You can no longer fast forward the playback when it comes to a few second before the current recording point.

Simultaneous Playback and Recording

With regard to HDD, you can continue recording a program while playing back another title in the same component (HDD).
To do so, press **[TOP MENU]** during recording and select a title you like to play back, and then press **[PLAY ►]**.
(You can also start the playback from the title list menu.)

To playback a title being recorded while continuing to record, refer to "Chasing Playback during Recording" on this page (available only with HDD).

Note

- Video CD, Audio CD, MP3/JPEG files recorded on a disc and DivX® files can also be played back during HDD recording.

Search

Title / Chapter Search

HDD DVD-V Video DVD-RW VR DVD-RW DVD-R DVD+RW DVD+R

Using [SKIP |◀◀ / ▶▶|] buttons

1 During playback, press [SKIP ▶▶|] to skip the current title or chapter and move to the next.

The unit moves to the next title or chapter one after the other.

To go back to the previous title or chapter, press **[SKIP |◀◀]** twice in quick successions.

Note

- With regard to HDD, chapter search using **[SKIP |◀◀ / ▶▶|]** is available only within the same title.

Using the [DISPLAY] button

1 During playback, press [DISPLAY].

2 Select the icon using [◀ / ▶], then press [ENTER/OK].

T for the title number is highlighted.

Searching for a Title:

3 Enter the desired title number to search for using [▲ / ▼] or [the Number buttons], then press [ENTER/OK].

Title search will start.

Hint

- Total number of chapters and playback time of the selected title are also displayed.

Searching for a Chapter:

3 Press [◀ / ▶] to highlight the number displayed in the right side of the C icon.

4 Enter the desired chapter number to search for using [▲ / ▼] or [the Number buttons], then press [ENTER/OK] .

Chapter search will start.

Hint

- The title number and playback time of the selected chapter are also displayed.

Track Search

CD VCD (PBC OFF) MP3 JPEG DivX®

Using [SKIP |◀◀ / ▶▶|] buttons

1 During playback, press [SKIP ▶▶|] to skip the current track and move to the next.

The unit moves to the next track one after the other.

To go back to the previous track, press **[SKIP |◀◀]** twice in quick successions. The unit moves backward one track at a time.

Using the [DISPLAY] button

For audio CD, skip to step **2**.

1 During playback, press [DISPLAY].

2 Select the icon using [◀ / ▶], then press [ENTER/OK].

T for the track number is highlighted.

3 Enter the desired track number to search for using [▲ / ▼] or [the Number buttons], then press [ENTER/OK].

Track search will start.

Hint

- For Video CDs, you can perform the track search function in stop mode without turning PBC off manually.

Note

- During Random playback or Programme playback, you cannot search the desired track.

Direct Search

CD

You can search the desired track directly.

Using [the Number buttons]

1 During playback, if the display menu is not displayed, press [the Number buttons] to enter the desired track number.

Note

- During Random playback or Programme playback, you cannot search the desired track directly.

Time Search

HDD DVD-V DVD-RW DVD-RW DVD-R DVD+RW DVD+R CD VCD (PBC OFF) DivX®

For audio CD, skip to step **2**.

1 During playback, press [DISPLAY].

2 Select the icon using [◀ / ▶], then press [ENTER/OK].

T for the title or track number is highlighted.

3 Press [◀ / ▶] to highlight .

4 Enter the desired time to search for using [▲ / ▼] or [the Number buttons], then press [ENTER/OK].

Time search will start.

Note

- During Random playback or Programme playback, you cannot search the desired time.
- The title number and chapter number of the setting time are also displayed.
- Time search function is available only in the same track or title.

Repeat / Random / Programme Playback / Slide Show

Repeat Playback

HDD DVD-V DVD-RW DVD-RW DVD-R DVD+RW DVD+R CD VCD (PBC OFF) MP3 JPEG DivX®

For audio CD or MP3, skip to step **2** or press **[REPEAT]** and skip to step **3**.

1 During playback, press [DISPLAY].

Or press **[REPEAT]** during playback, and follow from step **3**.

2 Select the icon using [◀ / ▶], then press [ENTER/OK] within 1 second, or wait for 1 second to display the selection menu.

3 Select the desired option to repeat using [▲ / ▼], then press [ENTER/OK].

The selected repeat playback will start.
The following operations are available.

Title:
The current title will be played back repeatedly. (HDD, DVD only)

Chapter:
The current chapter will be played back repeatedly. (HDD, DVD only)

All:
The current disc will be played back repeatedly. (DVD-RW (VR mode), Audio CD, Video CD, MP3, JPEG and DivX® only)

A-B:
The A-B point will be played back repeatedly. (HDD, DVD, Audio CD, Video CD and DivX® only)
When pressing **[ENTER/OK]** while A-B is highlighted, A-B repeat is set.
- Press **[ENTER/OK]** again to decide the starting point (A).
- Press **[ENTER/OK]** after setting point (A) to select the ending point (B).

Track:
The current track will be played back repeatedly. (Audio CD, Video CD, MP3, JPEG and DivX® only)

Group:
The current group will be played back repeatedly. (MP3, JPEG and DivX® only)

Hint

- To cancel the repeat playback, select “OFF” at step **3**. The repeat setting is also cancelled when you stop playback.
- You can also select the repeat playback by pressing **[REPEAT]**.

Note

- Point B for the repeat A-B playback should be set within the same title or track as point A.
- You cannot select “Group” during the random playback of MP3 and JPEG files.
- Chapter / Track repeat function is cancelled whenever **[SKIP ⏮ / ⏭]** is pressed.
- For some DivX® files, A-B Repeat playback may not function.
- For Video CDs with PBC function, repeat play does not work while the PBC function is on.

Random Playback

CD VCD (PBC OFF) MP3 JPEG

You can use this function to play back a disc randomly instead of in the recorded order.

1 In stop mode, press [SETUP].

2 Select “CD Playback Mode” using [▲ / ▼], then press [ENTER/OK].

CD Playback Mode menu will appear.

3 Select “Random Play” using [▲ / ▼], then press [ENTER/OK].

Random playback will start.

Hint

- To cancel random playback, press **[STOP ■]** twice during random playback. “OFF” appears on the screen.
- For Video CDs with PBC function, the PBC setting will be switched to off automatically when you start random playback.

Note

- During random playback, if you forward the track to the end, the playback speed of the next track will be normal.
- During random playback, you cannot use the search function except for the search with **[SKIP ⏮ / ⏭]**. By pressing **[SKIP ⏮]**, you can return only to the beginning of the current track.

Programme Playback

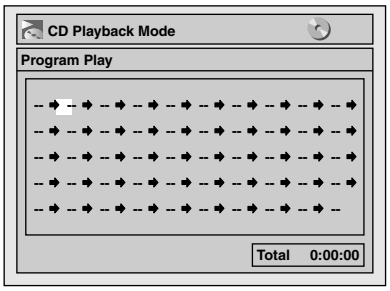
CD VCD (PBC OFF)

You can programme the disc to play back in your desired order.

1 Follow steps 1 and 2 in “Random Playback”.

2 Select “Program Play” using [▲ / ▼], then press [ENTER/OK].

3 Select the desired track using [▲ / ▼], then press [ENTER/OK] or [▶].



4 Press [PLAY ▶] to start programme playback.

Hint

- To erase tracks you selected, press **[CLEAR]**.
- You can make up to 50 track settings.
- To cancel programme playback, press **[STOP ■]** twice during programme playback. “OFF” appears on the screen.
- You may also select the desired track using **[the Number buttons]** at step **3**.
- For Video CDs with PBC function, the PBC setting will be switched to off automatically when you start programme playback.

Note

- During programme playback, if you forward the track to the end, the playback speed of the next track will be normal.
- During programme playback, you cannot use the search function except for the search with **[SKIP ⏮ / ⏭]**.

Slide Show

JPEG

You can select the display time between 5 seconds and 10 seconds.

1 Follow steps 1 and 2 in “Random Playback” on this page.

2 Select “Slide Show” using [▲ / ▼], then press [ENTER/OK].

3 Select the display time using [▲ / ▼], then press [ENTER/OK].

4 Press [SETUP] to exit.

Note

- Large-size JPEG files take a few moments to be displayed.

Selecting the Format of Audio and Video

You can select the format of audio and video to suit the content of the disc you are playing back.

Switching Subtitles

DVD-V DVD-RW DVD+RW DVD+R DivX®

Many DVD-Videos have subtitles in one or more languages. The available languages are usually printed on the disc case. You can switch subtitle languages at any time during playback.

1 During playback, press [DISPLAY].

2 Select the icon using [◀ / ▶], then press [ENTER/OK] within 1 second, or wait for 1 second to display the selection menu.

3 Select the desired subtitle language using [▲ / ▼], then press [ENTER/OK].

Subtitles are displayed in the selected language. If you select “OFF”, subtitles will disappear.

Note

- With some discs it is only possible to change the subtitle language from the disc menu. Press **[TOP MENU]** or **[DISC MENU]** to display the disc menu.
- If a 4-digit language code appears in the subtitle menu at step **3**, refer to the “Language Code” on page 93.
- For discs with DivX® files, the screen only displays the number of subtitle languages.

Switching Audio Soundtrack

HDD DVD-V DVD-RW CD VCD DivX®

When playing back a DVD-Videos recorded with two or more soundtracks (often in different languages), you can switch among them during playback.
When playing back the titles in HDD or VR mode DVD-RW discs recorded with bilingual audio, you can switch to main audio (L), sub audio (R) or a combination of both (L / R).
When playing back Audio CDs or Video CDs, you can switch among the left, the right channel and stereo.
For audio CD, skip to step **2** or press **[AUDIO))]** and skip to step **3**.

1 During playback, press [DISPLAY].

Or press **[AUDIO))]** during playback and follow from step **3**.

2 Select the icon using [◀ / ▶], then press [ENTER/OK] within 1 second, or wait for 1 second to display the selection menu.

3 Select a desired audio soundtrack or audio channel using [▲ / ▼], then press [ENTER/OK].

With a DVD-Video, VR mode DVD-RW, or DivX® files:
Audio soundtrack will switch.
Example:
English → Spanish → French
If the title contains both main and sub audio, you can further select L (main), R (sub), L/R (mixed of main and sub).
With an Audio CD or Video CD:
The Audio channel will switch.
Example:
L/R → L → R

Note

- For some discs, it is only possible to change the soundtrack from the disc menu. Press **[TOP MENU]** or **[DISC MENU]** to display the disc menu.

Switching Virtual Surround System

HDD DVD-V DVD-RW DVD-RW DVD-R DVD+RW DVD+R CD MP3

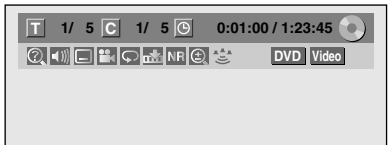
You can enjoy stereophonic virtual space through your existing 2 channel stereo system.
For audio CD or MP3, skip to step **2**.

1 During playback, press [DISPLAY].

Display menu will appear.

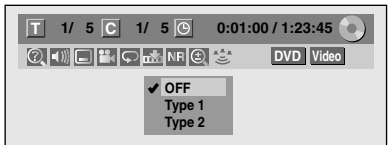
2 Select the icon using [◀ / ▶], then press [ENTER/OK] within 1 second, or wait for 1 second to display the selection menu.

Virtual Surround menu will appear.
e.g.) DVD-Video



3 Select “OFF”, “Type 1” or “Type 2” using [▲ / ▼], then press [ENTER/OK].

e.g.) DVD-Video



- OFF: No effect
- Type 1: Natural effect
- Type 2: Emphasised effect

Note

- Select Virtual Surround to “OFF” in a case the sound is distorted.
- The setting will be kept “OFF” when the unit is turned off.

Switching Camera Angles

DVD-V

Some DVD-Videos feature scenes shot from two or more angles. The disc case is usually marked with an angle icon if the disc has multi-angle scenes.

1 During playback, press [DISPLAY].

The angle icon appears when a switching camera angle is available. (Available only when the angle icon appears in bottom right on the TV screen.)

2 Select the icon using [◀ / ▶], then press [ENTER/OK].

The angle will switch each time you press **[ENTER/OK]**.

Note

- If the Angle Icon setting is “OFF” in the Setup menu, the icon will appear only when the disc is played back and the Display menu appears. (See page 83.)
- Even when the icon is not displayed, you can select the angle if the currently played back title has at least two multi-angle scenes.

Reducing Block Noise

HDD DVD-V Video DVD-RW VR DVD-RW DVD-R DVD+RW DVD+R VCD DivX®

1 During playback, press [DISPLAY].

2 Select the NR icon using [◀ / ▶], then press [ENTER/OK] within 1 second, or wait for 1 second to display the selection menu.

Noise Reduction menu will appear.

3 Select the desired option using [▲ / ▼], then press [ENTER/OK].

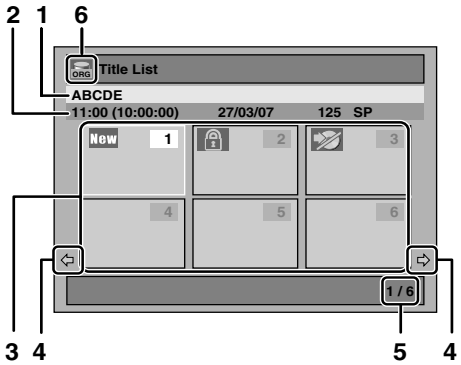
This function reduces noise in the playback picture.
When playing back discs recorded in long time modes such as EP or SLP, select “Type 1” or “Type 2”.
“Type 2” is more effective.
When playing back discs with a little noise, such as DVD-Videos, select “OFF”.

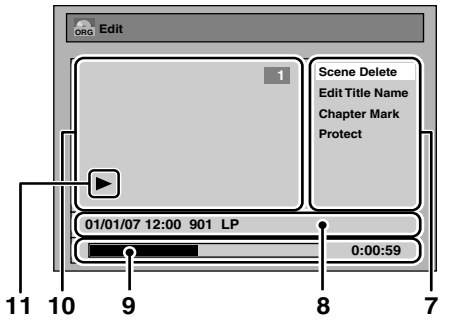
Editing

Guide to a Title List

Title list allows you to check the titles recorded on the disc easily. You can choose a title to play back from this list and easily edit the titles as you prefer.

Press [HDD] or [DVD], then press [TOP MENU].





1 Title name.
2 Title information, which displays recorded time, length of the title, date / month / year, recorded CH, and the recording mode.
3 Title list: List of titles recorded on the HDD or disc. Each title is indicated by its index picture. Index picture for the selected title can be seen in motion. Following icons may be displayed on the index picture.
- New : Indicating the title has never been played back yet.
- : Indicating the title is protected.
- : Indicating the title is a copy-protected title.
- : Indicating the title is a copy-once programme.
- ● : If you call up the title list while recording, "●" will be displayed on the index picture of the title currently being recorded. For DVD+RW/+R, empty title always appears at the last of the title list.

4 Arrow: Indicating there is a previous / next page.
5 Title list page number: Current page / total pages.
6 Title list icon, which indicates a type of the displayed title list.
- ORG : HDD (original) mode
- PL : HDD (Playlist) mode
- ORG : VR (original) mode
- PL : VR (Playlist) mode
- +VR : +VR mode
- Video : Video mode

7 Submenu: Submenus for the selected menu are displayed here.
8 Title name (editable): If you do not name the title, the recorded date, time, channel, and the recording mode are displayed here.
9 Progress bar: Indicating the progress of the playback.
10 Preview window: Preview of the selected title is displayed here.
11 Playback status: Indicating the current playback status of the selected title.

Press [RETURN/BACK] to exit the title list.

Editing Discs

You will find editing discs is easy. This unit offers convenient edit functions.
You can edit the following from a title list.
- **Assigning a name to a title**
- **Dividing a title**
- **Combining titles**
- **Adding titles to a Playlist**
- **Erasing all Playlist**
- **Setting or releasing the title protection**
- **Adding or deleting chapter marks**
- **Deleting titles or parts of titles**

(Possible editing functions depend on the recording format and editing method.)

What "Original" or "Playlist" is for?

There are 2 types for the title list: Original and Playlist.

Original:
Original is the list of the recorded programmes (titles) when they are recorded. Original is available for HDD and DVD-RW. Please note that editing the titles in the Original is like editing the original data. For example, if you erase a title in the Original, the title cannot be recovered.

HDD Original : Available to edit in the HDD Original

DVD-RW VR Original : Available to edit in the VR mode DVD-RWs Original

Playlist:
Playlist is the copy of the Original. You can edit the titles in the Playlist as you like without affecting the original data in the Original. It works like a backup for the Original. Delete a Playlist does not delete the corresponding Original. But if you delete an Original, the corresponding Playlists will be deleted. Playlist is available only for the HDD and the VR mode DVD-RWs.

HDD Playlist : Available to edit in the HDD Playlist

DVD-RW VR Playlist : Available to edit in the VR mode DVD-RWs Playlist

About Edit Mark:
Edit marks will be added automatically where title is edited, for example where a title is divided or combined. These marks work as chapter marks when you search for a chapter, but cannot be deleted like chapter marks. Also, when a title with chapter marks are dubbed from DVD to the HDD, those marks become edit marks once they are dubbed to the HDD.

Using these editing functions to modify copyrighted content for any purpose other than your private viewing may be prohibited under the Copyright Laws of the United States and other countries, and may subject you to civil and criminal liability.

Note

- A Playlist is not available for DVD-R or Video mode DVD-RW and DVD+RW/+R discs.
- It is not possible to edit a disc recorded in another video system other than PAL, such as NTSC.
- After finalising a DVD-RW/-R or DVD+R disc, you cannot edit any information that is on that disc.
- You can edit a disc recorded using the PAL system. It is not possible to edit discs recorded using the NTSC system.

Deleting Titles

HDD DVD-RW Video DVD-RW VR DVD-R DVD+RW DVD+R

You can delete titles you do not want to keep.
When an Original is deleted from HDD or VR mode DVD-RW disc, the recordable disc space will increase. Even when a Playlist is deleted, the original of the Playlist will remains, and recordable disc space will not increase.
Recordable disc space of Video mode DVD-RW and DVD+RW disc will increase when the last title on the title list is deleted. However, deleting the title will not change recordable disc space for DVD-R and DVD+R disc.

Note

- It is not possible to retrieve deleted titles.

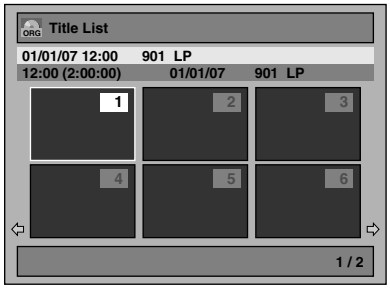
If you edit the HDD, press [HDD] first.
If you edit a disc, press [DVD] first.

1 In stop mode, press [TOP MENU].

Title List will appear.
For HDD and VR mode DVD-RW disc, press **[DISC MENU]** to switch between “Original” and “Playlist”.

2 Press [ENTER/OK] at the desired title with [▲ / ▼ / ◀ / ▶].

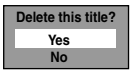
e.g.) VR mode DVD-RW disc



Pop up window will appear.

3 Select “Title Delete” using [▲ / ▼], then press [ENTER/OK].

4 Select “Yes” using [▲ / ▼], then press [ENTER/OK].



“Are you sure?” will appear. Select “Yes” using **[▲ / ▼]**, and then press **[ENTER/OK]**.
Title is deleted.

5 Press [RETURN/BACK] or [STOP ■] to exit.

Writing onto the disc starts.
It may take awhile to write the data on a disc.

Note

- If you delete the title in DVD+RW disc, deleted title will be displayed as “Empty”.
- You cannot overwrite on the “Empty”.

Deleting Selected Titles

HDD

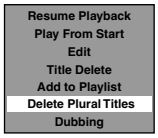
You can delete titles which you do not need anymore. Please be advised that the titles once deleted cannot be brought back.

1 Press [HDD], then press [TOP MENU].

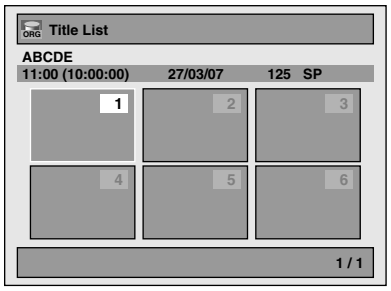
HDD : 99 chapters per title.

2 Select any title using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].

3 Select "Delete Plural Titles" using [▲ / ▼], then press [ENTER/OK].

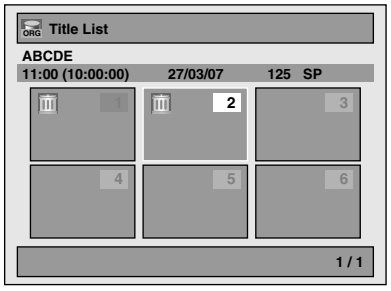


4 Select the title you want to delete using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].



Trash mark will appear indicating the title is marked for deletion.

5 Repeat step 4 until you select all the titles you want to delete.

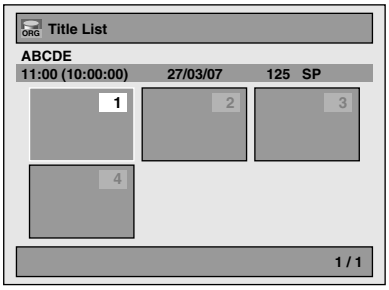


To remove the trash mark from the title:
Select the title with the trash mark, then press **[ENTER/OK]**.

6 Press [CLEAR].

Confirmation message will appear.

7 Select "Yes" using [▲ / ▼], then press [ENTER/OK].



Final confirmation message will appear. Select "Yes", then press **[ENTER/OK]**.

Editing Title Name

HDD DVD-RW DVD-RW DVD-R DVD+RW DVD+R

You can edit the title names from this menu.
The title names you edit will appear on the title list.

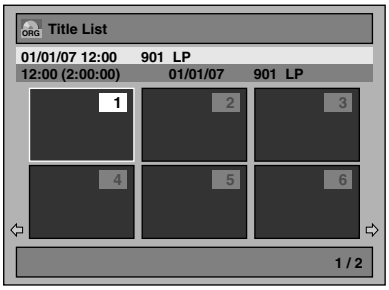
If you edit the HDD, press [HDD] first.
If you edit a disc, press [DVD] first.

1 In stop mode, press [TOP MENU].

Title list will appear.
For HDD and VR mode DVD-RW disc, press **[DISC MENU]** to switch between "Original" and "Playlist".

2 Press [ENTER/OK] at the desired title with [▲ / ▼ / ◀ / ▶].

e.g.) VR mode DVD-RW disc



Pop up window will appear.

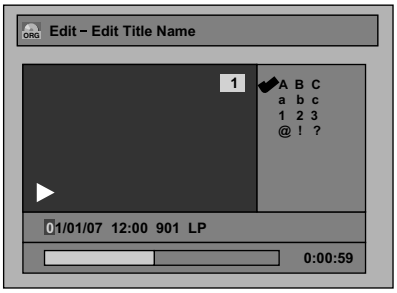
3 Select "Edit" with [▲ / ▼], then press [ENTER/OK].

Edit menu will appear.

4 Select "Edit Title Name" using [▲ / ▼], then press [ENTER/OK].

A window for entering the title name will appear.

5 To enter the title name, refer to "Guide to Editing Title Names" on this page.



When you finish entering the title name, press **[ENTER/OK]**.

6 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

The name you edited becomes the title.

7 Press [RETURN/BACK] and then [RETURN/BACK] or [STOP ■] to exit.

Writing onto the disc starts.
It may take awhile to write the data on a disc.

Guide to Editing Title Names

Step 1 : Select the desired character set using **[▲ / ▼]**, then press **[ENTER/OK]**.
Step 2 : Using the list below as a guide, press **[the Number buttons]** repeatedly until the desired letter appears.

Select ✔ / Press	ABC	abc	123	@ ! ?
0	<space>	<space>	0	<space>
1	–	–	1	! " # $ % & ' ( ) ∗ + , - . / : ; < = > ? @ [ ] ^ _ { | }
2	ABC	abc	2	–
3	DEF	def	3	–
4	GHI	ghi	4	–
5	JKL	jkl	5	–
6	MNO	mno	6	–
7	PQRS	pqrs	7	–
8	TUV	tuv	8	–
9	WXYZ	wxyz	9	–

- Characters set will be changed to the "@!?" automatically if you press **[1]** after you selected the "ABC" or "abc" mode.

Note

- To delete letters, press **[CLEAR]** repeatedly. Press and hold **[CLEAR]** to delete all letters.
- Press **[◀ / ▶]** to move the cursor to the left or right.
- You can enter up to 30 letters.
- Unrecognisable characters will be replaced with asterisks (*). If you delete them, adjoining characters may change to asterisks (*) or other.

Setting or Clearing Chapter Markers

HDD | DVD-RW VR | DVD+RW | DVD+R

You can add chapter markers to a title. After a title is marked with chapters, you can use the chapter search feature.
You can set a chapter marker anywhere you want.

If you edit the HDD, press [HDD] first.
If you edit a disc, press [DVD] first.

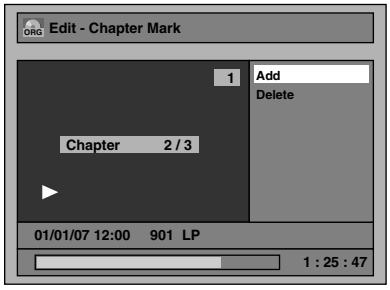
1 Follow the steps 1 to 3 in "Editing Title Name" on page 72.

2 Select "Chapter Mark" using [▲ / ▼], then press [ENTER/OK].

3 Use [SKIP I◀◀ / ▶▶I], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ❚❚] to find the point where you will create a new chapter marker. Or, use [SKIP I◀◀ / ▶▶I] to find a chapter marker that you wish to delete.

4 Select "Add" or "Delete" accordingly using [▲ / ▼], then press [ENTER/OK].

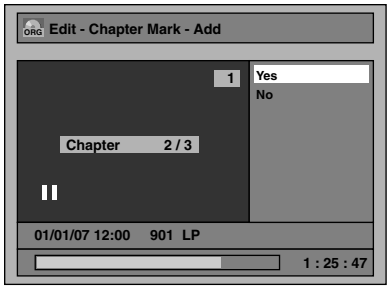
e.g.) VR mode DVD-RW disc Original



You cannot delete the first chapter of a title.

5 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

e.g.) VR mode DVD-RW disc Original



A chapter marker is added.

Adding a chapter marker:
If you select "Add" at step **4**, a new chapter marker is created at the point you specified.

Deleting a chapter marker:
If you select “Delete” at step **4**, the chapter marker you selected is deleted.

6 Press [RETURN/BACK].

7 Press [RETURN/BACK] again and then [RETURN/BACK] or [STOP ■] to exit.

For DVD, the data will be written onto the disc momentarily.
This operation may take awhile to be completed.

Note

- Maximum numbers of chapter for each media:
  HDD : 99 chapters per title
  VR mode DVD : 999 chapters per entire Playlist and Original
  +VR mode DVD : 254 chapters per disc, 99 chapters per title
- Only with regard to DVD editing, you may not be able to add chapter marks depending on the duration of the title or the number of chapters.
- Only with regard to DVD editing, remaining time of the disc may decrease when adding chapter marks or increase when clearing chapter marks depending on the recording time or edited contents.

Setting or Clearing Chapter Markers for Video Mode DVD-RW disc

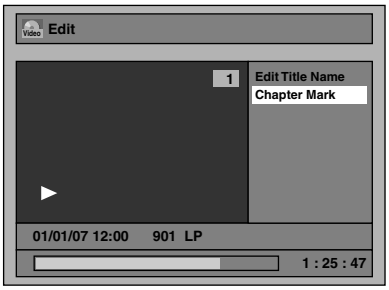
Video DVD-RW

For titles in Video mode DVD-RW disc, you can set or edit chapter at every selected time interval. You can also clear the chapter mark.
You can only specify the interval of chapter marks that last for more than 5 minutes.

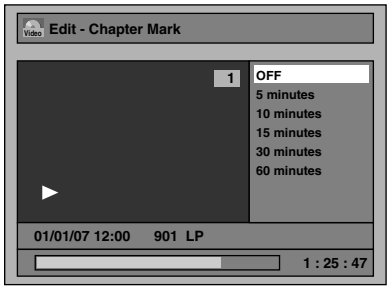
Press [DVD] first.

1 Follow the steps 1 to 3 in “Editing Title Name” on page 72.

2 Select “Chapter Mark” using [▲ / ▼], then press [ENTER/OK].



3 Select the desired interval using [▲ / ▼], then press [ENTER/OK].



4 Select “Yes” using [▲ / ▼], then press [ENTER/OK].

Chapter markers are added.
If you select “OFF” at step **3**, all the chapter markers are erased.

5 Press [RETURN/BACK] and then [RETURN/BACK] or [STOP ■] to exit.

Writing onto the disc starts.
It may take awhile to write the data on a disc.

Note

- You cannot select the chapter mark of the title which is less than 5 minutes.
- You cannot select a chapter marker interval that exceeds the length of a title.
- The length of chapters may slightly deviate from the one specified at the step **3**.
- A chapter marker may be delayed depending on the recording content.
- Maximum number of chapter for Video mode DVD is 99 chapters per disc and title.

Hiding Chapters

DVD+RW DVD+R

You can hide chapters from the title list.
Hidden chapters are skipped during playback.

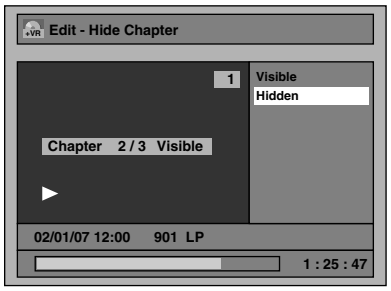
Press [DVD] first.

1 Follow the steps 1 to 3 in “Editing Title Name” on page 72.

2 Select “Hide Chapter” using [▲ / ▼], then press [ENTER/OK].

3 Use [SKIP ⏮ / ⏭], [PLAY ►] and [PAUSE ❚❚] to decide the chapter to be hidden.

4 Select "Hidden" using [▲ / ▼], then press [ENTER/OK].



5 Press [RETRY/BACK].

6 Press [RETURN/BACK] again and then [RETURN/BACK] or [STOP ■] to exit.

Writing onto the disc starts.
It may take awhile to write the data on a disc.

If you want hidden chapters to be "Visible", select the chapter to be shown. Then use [▲ / ▼] to select "Visible" at the step 4 above.
Data will be written onto the disc momentarily.

Note

- "Hidden" will be displayed in the preview window while previewing the hidden chapter.
- When you make all chapters in the title "Hidden", "Hidden" is displayed in a thumbnail of the title list.

Protecting Titles

HDD Original / DVD-RW VR Original

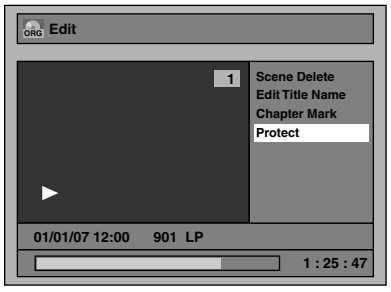
To prevent the accidental editing or erasing of the titles, you can protect them in the Original menu.

If you edit the HDD, press [HDD] first.
If you edit a disc, press [DVD] first.

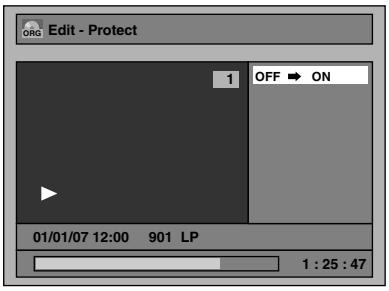
1 Follow the steps 1 to 3 in "Editing Title Name" on page 72.

2 Select "Protect" using [▲ / ▼], then press [ENTER/OK].

e.g.) VR mode DVD-RW disc Original



3 Press [ENTER/OK] again.



For DVD, writing the disc starts.
It may take awhile to write the data on a disc.

- If the title is already protected, "ON ➡ OFF" will appear instead. Press **[ENTER/OK]**, to release the title from protection.
- The protected title will be marked with icon.

4 Press [RETURN/BACK] and then [RETURN/BACK] or [STOP ■] to exit.

For DVD, writing onto the disc starts.
It may take awhile to write the data on a disc.

To protect a whole disc (VR mode DVD-RW and DVD+RW/+R discs only):
Select "Disc Protect OFF ➡ ON" from the Disc Menu, then select "Yes". Refer to "Setting a Disc to Protect" on page 53.

Dividing a Title

HDD / DVD-RW VR / DVD+RW
Playlist

You can divide a title into two new titles.

If you edit the HDD, press [HDD] first.
If you edit a disc, press [DVD] first.

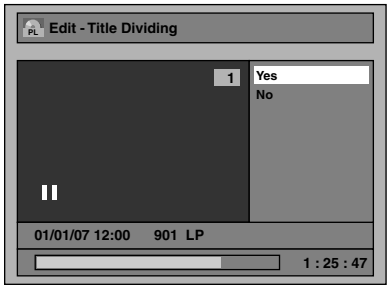
1 Follow steps 1 to 3 in "Editing Title Name" on page 72.

2 Use [SKIP ⏮ / ⏭], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ❚❚] to find the point where you wish to divide the title.

3 Select "Title Dividing" using [▲ / ▼], then press [ENTER/OK].

4 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

e.g.) VR mode DVD-RW disc playlist



The title is divided into two new titles with the same title names.

For DVD+RW : Writing onto the disc starts. It may take awhile to write the data on a disc.

For HDD and VR mode DVD-RW disc : Proceed to step **5**.

5 Press [RETURN/BACK] or [STOP ■] to exit.

For DVD, writing the disc starts.
It may take awhile to write the data on a disc.

Note

- You cannot divide a title of the disc when the number of recording titles reaches the maximum of 600 (HDD), 99 (-RW) or 49 (+RW), or the number of recording chapters reaches the maximum of 999 (-RW) or 254 (+RW).

Combining Titles

HDD Playlist | VR DVD-RW Playlist

You can combine two titles into a single title.

If you edit the HDD, press [HDD] first.
If you edit a disc, press [DVD] first.

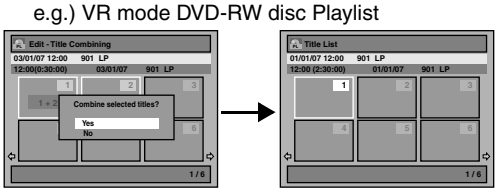
1 Follow steps 1 to 3 in "Editing Title Name" on page 72.

2 Select "Title Combining" using [▲ / ▼], then press [ENTER/OK].

3 Select another title to combine using [▲ / ▼ / ◀ / ▶], then press [ENTER/OK].

4 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

The two titles will combine into a single title.
e.g.) VR mode DVD-RW disc Playlist



5 Press [RETURN/BACK] or [STOP ■] to exit.

For DVD, writing onto the disc starts.
It may take awhile to write the data on a disc.

Note

- You cannot select the same title twice and combine it into a single title.
- If either one of the two original titles is deleted, the combined new title is also deleted.

Adding Titles to a Playlist

HDD Original | VR DVD-RW Original

For HDD and VR mode DVD-RW disc, you can add a title to the Playlist as you wish.

If you edit the HDD, press [HDD] first.
If you edit a disc, press [DVD] first.

1 Follow the steps 1 to 2 in "Deleting Titles" on page 71.

2 Select "Add To Playlist" using [▲ / ▼], then press [ENTER/OK].

3 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

The title is added to Playlist.

4 Press [RETURN/BACK] or [STOP ■] to exit.

For DVD, writing onto the disc starts.
It may take awhile to write the data on a disc.

Hint

- To delete a title from the Playlist, refer to "Deleting Titles" on page 71.
- When the number of the Playlist reaches its maximum (refer to page 34), or when the number of the total chapter marks of the Playlists reaches 999 (only for VR mode DVD-RW), "Add To Playlist" cannot be selected.

Deleting All Playlists

HDD DVD-RW

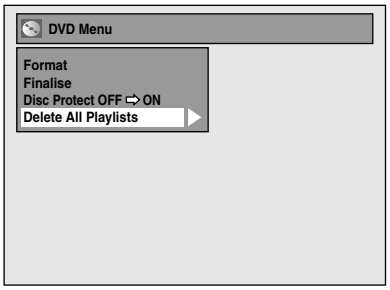
All Playlists can be deleted if it is no longer needed.

1 Press [SETUP].

2 Select "DVD Menu" (for DVD) or "HDD Menu" (for HDD) using [▲ / ▼], then press [ENTER/OK].

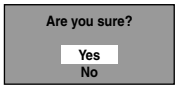
3 Select "Delete All Playlists" using [▲ / ▼], then press [ENTER/OK].

e.g.) DVD



4 Select "Yes" using [▲ / ▼], then press [ENTER/OK].

"Are you sure?" will appear.
Select "Yes" using **[▲ / ▼]**, and then press **[ENTER/OK]**.



Playlist is deleted.

For DVD, writing onto the disc starts.
It may take awhile to write the data on a disc.

Note

- Deleting a Playlist will not increase the available recording time on the disc.

Deleting Parts of Titles

HDD DVD-RW

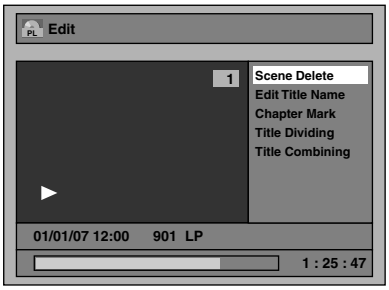
You can delete a specific part of a title.
Even when a title is deleted from the Playlist, the original title will remain as it is.

If you edit the HDD, press [HDD] first.
If you edit a disc, press [DVD] first.

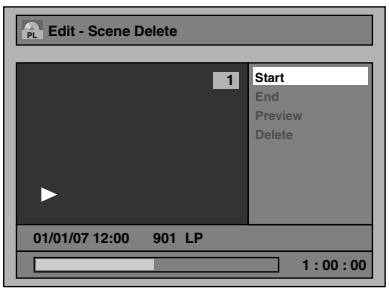
1 Follow the steps 1 to 3 in "Editing Title Name" on page 72.

2 Select "Scene Delete" using [▲ / ▼], then press [ENTER/OK].

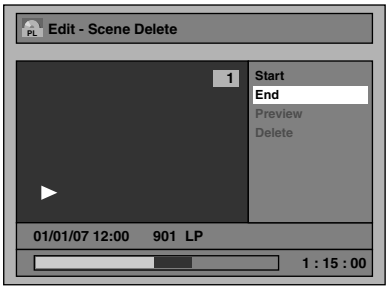
e.g.) VR mode DVD-RW disc Playlist



3 Use [SKIP |◀◀ / ▶▶|], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ❚❚] to find the start point, then press [ENTER/OK].



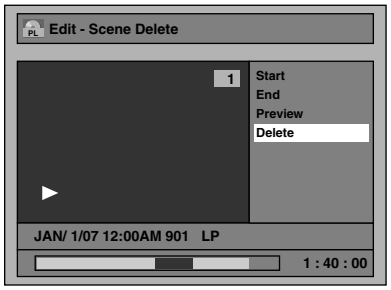
Then use [SKIP |◀◀ / ▶▶|], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ❚❚] again to move to the end point, and press [ENTER/OK].



The cursor will move to “Preview”.
The bar at the bottom of the screen indicates the total and the elapsed time of the title, and the area selected for deletion is indicated in red.
You can check the preview by pressing **[ENTER/OK]**.

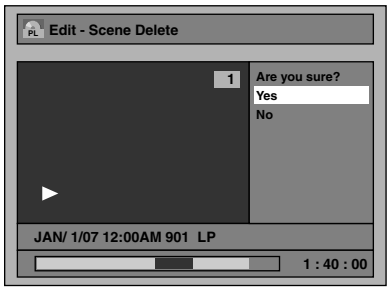
- Before and after 5 seconds of the deleted point will be playback for preview.

4 Select “Delete” using [▲ / ▼], then press [ENTER/OK].



5 Select “Yes” using [▲ / ▼], then press [ENTER/OK].

“Are you sure?” will appear. Select “Yes” using **[▲ / ▼]**, and then press **[ENTER/OK]**.



The part of the title is deleted.

6 Press [RETURN/BACK] and then [RETURN/BACK] or [STOP ■] to exit.

For DVD, writing onto the disc starts.
It may take awhile to write the data on a disc.

Note

- For VR mode DVD-RW disc, you cannot select “Scene Delete” if the number of chapter markers in the Original or Playlist is more than 900. (Depends on the content, there is a case that you cannot select “Scene Delete” before the number of chapter marks reaches 900.)
- When a scene is deleted from an original, the scene on the playlist will also be deleted.

Deleting All Titles in HDD

HDD

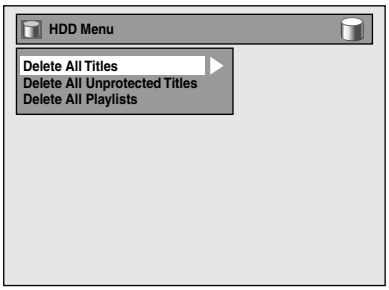
Press **[STOP ■]** if you are playing back a disc.

1 Press [SETUP].

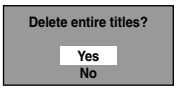
2 Select “HDD Menu” using [▲ / ▼], then press [ENTER/OK].

3 Select the desired type of deletion using [▲ / ▼], then press [ENTER/OK].

Select “Delete All Unprotected Titles” if you want to delete only the unprotected titles.
Select “Delete All Titles” if you want to delete all titles including the ones protected.
Select “Delete All Playlists” if you want to delete all Playlists.



4 Select “Yes” using [▲ / ▼], then press [ENTER/OK].



Final confirmation message will appear. Select “Yes”, then press **[ENTER/OK]**.
Titles are now deleted.

Function Setup

The following table is the contents which you can set and the default settings.
Refer to the following table for useful operation.

Setup		Items (highlight is the default)			Contents
General Setting	Playback	Parental Lock ➥ Page 81		All level 1 to 8	Set the parental level for DVD disc playback.
		Audio Out ➥ Pages 81-82	Dynamic Range Control	ON OFF	Compressing the range of sound volume.
			PCM	48kHz 96kHz	Set whether the sound recorded in 96kHz will be down sampled to 48kHz.
			Dolby Digital	PCM Stream	Set the type of sound signal which outputs from the digital out jack.
			MPEG	PCM Stream	Set the digital out signal specification.
			DTS	ON OFF	Set whether DTS signal is output or not.
		Disc Menu Language ➥ Page 82		English Other	Set the language for Disc Menu.
		Audio Language ➥ Page 82		Original English Other	Set the language for audio.
		Subtitle Language ➥ Page 83		OFF English Other	Set the language for subtitles.
		Angle Icon ➥ Page 83		ON OFF	Set whether or not to display the angle icon.
		Still Mode ➥ Page 83		Auto Field Frame	Set the type of still image in pausing playback.
		Variable Skip / Replay ➥ Page 83		Variable Skip 5 seconds 15 seconds 30 seconds 1 minute 5 minutes	Set the amount of skip time when you press **[VARIABLE SKIP]**.
				Variable Replay 5 seconds 15 seconds 30 seconds 1 minute 5 minutes	Set the amount of rewind time when you press **[VARIABLE REPLAY]**.
		TV System ➥ Page 83		PAL Auto	Set the TV system.
	Display	Screen Saver ➥ Page 84		OFF 5 minutes 10 minutes 15 minutes 30 minutes	Set the idling time before the screen saver starts.
		FL Dimmer ➥ Page 84		Auto Bright Dark	Set the brightness of the Front Panel Display.
	Video	TV Aspect ➥ Page 84		4:3 Letter Box 4:3 Pan & Scan 16:9 Wide	Set a picture size according to aspect ratio of your TV.
		Select Video ➥ Page 47		Video In S-Video In	Set the video input type for the external input.
		Video Out ➥ Page 84		SCART (RGB) Component Progressive (P) Component Interlace (I)	Sets the video output mode.

Setup		Items (highlight is the default)			Contents
General Setting	Recording	Auto Chapter ➥ Page 36		OFF 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Insert chapter marks periodically.
		Recording Audio Select (XP) ➥ Page 38		PCM Dolby Digital	Set the recording audio type. (Only when the Rec Mode is set to XP.)
		Auto Finalise ➥ Page 54		ON OFF	Set the unit to finalise the disc automatically.
		Aspect Ratio (Video mode) ➥ Page 36		Auto 4:3 16:9	Set a aspect ratio for Video mode recording.
		Make Recording Compatible ➥ Page 35		ON OFF	Set to prohibiting additional recording (OFF) or to replace the title list after recording (ON).
		Bilingual Recording Audio ➥ Page 38		Main Sub	Set the audio type for recording.
		External Input Audio ➥ Page 37		Stereo Bilingual	Set the external input audio type for recording.
	Clock	Clock Setting ➥ Page 32			Set the clock.
		Auto Clock Setting ➥ Page 32		ON OFF	Set the clock automatically.
	Channel	Auto Tuning (DVB & ANALOG) ➥ Page 24			Tune the DVB & ANALOG channels automatically.
		DVB Channel Setup	Edit Channels ➥ Page 27		Lock the DVB channels, edit the favourite lists.
			Auto Tuning ➥ Page 26		Tune the DVB channels automatically.
			Manual Tuning ➥ Page 27		Tune the DVB channels manually.
			Signal Information ➥ Page 28		Display the detailed information of the current DVB channel.
		ANALOG Channel Setup	Auto Tuning ➥ Page 25		Tune the analogue channels automatically.
			Manual Tuning ➥ Page 25		Tune the analogue channels manually.
			Move ➥ Page 26		Move the analogue channels to different position.
	DivX	DivX® VOD ➥ Page 57			Provide DivX® VOD registration code.
		DivX Subtitle ➥ Page 85		OFF English French Spanish German Italian Swedish Dutch Russian1 Russian2 Hungarian Polish Czech Hebrew	Set the language for DivX® Subtitle.
	HDMI	Format ➥ Page 86		RGB YCbCr	Set the colour space for the HDMI output.
		HDMI Audio ➥ Page 86		ON OFF	Set whether to output the HDMI audio signal or not.
		RGB Range ➥ Page 86		Normal Enhanced	Set the black-white contrast level for HDMI RGB output.
	Reset All ➥ Page 87				Set to the default setting.

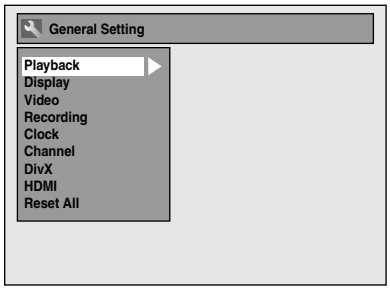
Note

- Your change to each settings stays on even when the power is switched off.
- An item which is not currently available is grayed in the settings.

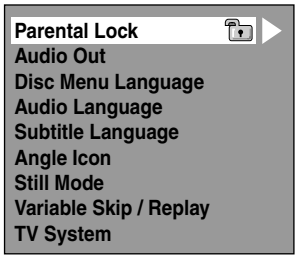
Playback

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Playback" using [▲ / ▼], then press [ENTER/OK].



3 Select a desired item using [▲ / ▼], then press [ENTER/OK].



4 Refer to 1. to 9. on pages 81 to 83 and set the selected item.

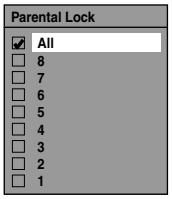
5 When you finish with the setting, press [SETUP] to exit.

1. Parental Lock (Default: All) (DVD only)

Set the Parental Lock level.

Change the Parental Lock level using [▲ / ▼], then press [ENTER/OK].

Proceed with either of the following steps.



Parental level

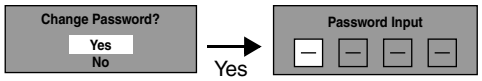
All: All parental locks are cancelled.
8: DVD software of any grade (adult / general / children) can be played back.
7 to 2: Only DVD software intended for general use and children can be played back.
1: Only DVD software intended for children can be played back.

Note

- The parental lock function may not be available on some discs.
- It may be difficult to determine if some DVDs support the parental lock function. Be sure to confirm that the parental lock function operates in the way that you have set.
- Record the password in case you forget it.

A password is not yet set

Select "Yes" using [▲ / ▼], then press [ENTER/OK]. Enter a new password using [the Number buttons], then press [ENTER/OK].



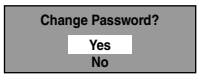
Your setting is activated.

If you select "No", press **[SETUP]** to exit.

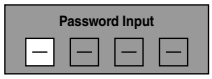
A password is already set

Enter the current password using [the Number buttons].

If you want to change the password, select "Yes" using **[▲ / ▼]**, then press **[ENTER/OK]**.



Enter a new password using [the Number buttons], then press [ENTER/OK].



Your setting is activated.

Note

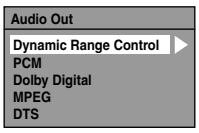
- Press **[CLEAR]** to erase numbers entered incorrectly.
- If you forget your password or you want to clear all settings in Parental Lock, enter **[4]**, **[7]**, **[3]**, **[7]** using **[the Number buttons]** at the option window. Your password is cleared and parental levels are set to "All".

2. Audio Out

Choose the appropriate audio setting for your external device.

It will only affect a disc playback.

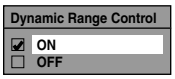
Select a desired item using [▲ / ▼], then press [ENTER/OK].



Dynamic Range Control (Default: ON) (DVD only)

Set to “ON” to make the dynamic range narrower.

Select a setting using [▲ / ▼], then press [ENTER/OK].



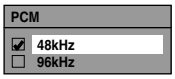
Your setting is activated.
The Dynamic Range Control function is effective only with analogue audio connection.

Note

- The Dynamic Range Control function is available only on discs recorded in the Dolby Digital format.

PCM sampling (Default: 48kHz)

Select a setting using [▲ / ▼], then press [ENTER/OK].



Your setting is activated.

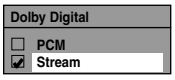
48kHz: If your amplifier / decoder is NOT compatible with 96 kHz PCM, select “48kHz”. Sound recorded at 96 kHz is down sampled to 48 kHz.
96kHz: If your amplifier / decoder is compatible with 96 kHz PCM, select “96kHz”. Sound is sampled at 96 kHz.

Note

When playing back a disc with copyright protection:
- Even if you select “96kHz”, the sound is down sampled to 48 kHz.

Dolby Digital conversion (Default: Stream)

Select a setting using [▲ / ▼], then press [ENTER/OK].



Your setting is activated.

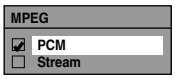
PCM: Converts the Dolby Digital into PCM (2 channel).
If your amplifier / decoder is NOT compatible with Dolby Digital, set to “PCM”.
Stream: Outputs Dolby Digital signals.
If your amplifier / decoder is compatible with Dolby Digital, set to “Stream”.

Hint

When playing back a DVD-RW disc recorded in VR mode:
- If the audio source on a disc is in Dolby Digital format, set “Dolby Digital” to “PCM” so that you can switch to main audio (L), sub audio (R), or a combination of both (L / R) using your amplifier / decoder.

Settings for MPEG (Default: PCM) (DVD only)

Select a setting using [▲ / ▼], then press [ENTER/OK].

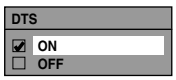


Your setting is activated.

PCM: Converts MPEG into PCM.
If your amplifier / decoder is NOT compatible with MPEG, set to “PCM”.
Stream: Outputs MPEG Audio signals.
If your amplifier / decoder is compatible with MPEG, set to “Stream”.

Settings for DTS (Default: ON) (DVD only)

Select a setting using [▲ / ▼], then press [ENTER/OK].



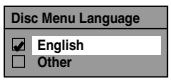
Your setting is activated.

ON: Outputs DTS signals.
If your amplifier / decoder is compatible with DTS, set to “ON”.
OFF: No DTS signal is output.
If your amplifier / decoder is NOT compatible with DTS, set to “OFF”.

3. Disc Menu Language (Default: English) (DVD only)

Set the Disc Menu language.

Select a setting using [▲ / ▼], then press [ENTER/OK].

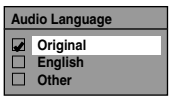


Your setting is activated.

4. Audio Language (Default: Original) (DVD only)

Set the Audio language.

Select a setting using [▲ / ▼], then press [ENTER/OK].

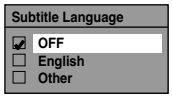


Your setting is activated.
If “Original” is selected, the audio language is the default of the inserted disc.

5. Subtitle Language (Default: OFF) (DVD only)

Set the Subtitle language.

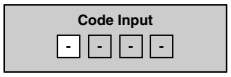
Select a setting using [▲ / ▼], then press [ENTER/OK].



Your setting is activated.

If "Other" is selected, enter the appropriate 4-digit code using [the Number buttons].

Refer to "Language Code" on page 93.



When you finish entering the code, press [ENTER/OK].

Hint

- You can also change or switch off the subtitles on a DVD from the disc menu if it is available.
- Press **[CLEAR]** or **[◀]** to erase numbers entered incorrectly.

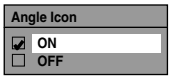
Note

- You can only select the languages supported by the inserted disc.
- The Audio Language setting may not be available for some discs.

6. Angle Icon (Default: ON) (DVD only)

Set the angle icon.

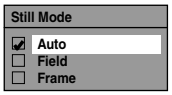
Select a setting using [▲ / ▼], then press [ENTER/OK].



Your setting is activated.

7. Still Mode (Default : Auto) (DVD only)

Select a setting using [▲ / ▼], then press [ENTER/OK].



Your setting is activated.

Auto: Automatically select the best resolution setting ("Frame" or "Field") based on the data characteristics of the pictures.

Field: Select "Field" when the pictures are still unstable even if "Auto" is selected. "Field" stabilises the pictures, although the picture quality may become coarse due to the limited amount of data.

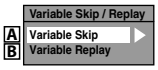
Frame: Select "Frame" to display relatively motionless pictures in higher resolution. "Frame" improves the picture quality, although it may unstabilise the pictures due to simultaneous output of two Field data.

Note

- An individual picture on TV screen is called as Frame, which consists of two separate images called as Field. Some pictures may be blurred at the "Auto" setting in still mode due to their data characteristics.

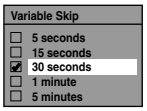
8. Variable Skip / Replay

Assign **[VARIABLE SKIP]** or **[VARIABLE REPLAY]** to skip or rewind by a certain amount of time when they are pressed.
Select a desired item using [▲ / ▼], then press [ENTER/OK].

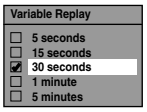


Refer to the explanations below and set the selected item.

A : Variable Skip (Default: 30 seconds)
Sets the amount of skip time for **[VARIABLE SKIP]**.

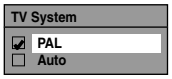


B : Variable Replay (Default: 30 seconds)
Sets the amount of rewind time for **[VARIABLE REPLAY]**.



9. TV System (Default : PAL) (DVD only)

Select a setting using **[▲ / ▼]**, then press **[ENTER/OK]**.



Your setting will be activated.

PAL: Outputs a modified PAL signal for viewing discs recorded with the NTSC system on a PAL system TV.

Auto: Changes the video system (PAL / NTSC) automatically according to the format of the inserted disc.

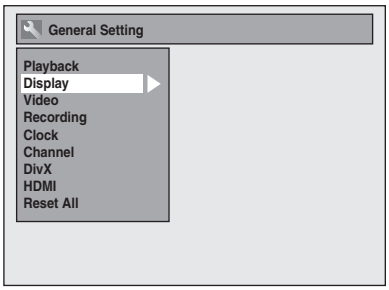
Note

- With discs recorded using the PAL system, a PAL signal is output for viewing on a PAL system TV.
- Discs recorded with the PAL system cannot be viewed on an NTSC system TV.
- With discs recorded using the NTSC system, an NTSC signal is output for viewing on an NTSC or Multi system TV.
- With discs recorded using the NTSC system, select PAL to view on a PAL system TV.

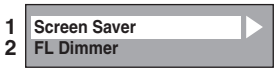
Display

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Display" using [▲ / ▼], then press [ENTER/OK].



3 Select the desired item using [▲ / ▼], then press [ENTER/OK].



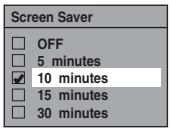
4 Refer to 1. and 2. on this page and set the selected item.

5 When you finish with the setting, press [SETUP] to exit.

1. Screen Saver (Default: 10 minutes)

Set the screen saver time delay.

Select a setting using [▲ / ▼], then press [ENTER/OK].

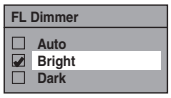


Your setting is activated.

2. FL Dimmer (Default: Bright)

Set the front panel display brightness.

Select a setting using [▲ / ▼], then press [ENTER/OK].

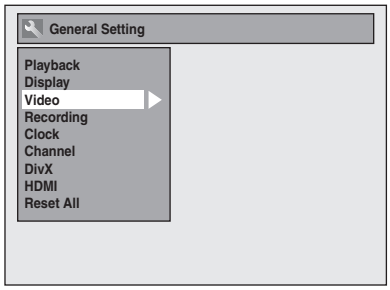


You can choose one from "Auto", "Bright" or "Dark".
If "Auto" is selected, the display gets dark when the power is off.

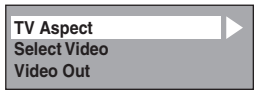
Video

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Video" using [▲ / ▼], then press [ENTER/OK].



3 Select the desired item using [▲ / ▼], then press [ENTER/OK].



4 Refer to 1. and 3. on this page and set the selected item.

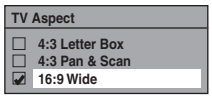
For 2., refer to page 47.

5 When you finish with the setting, press [SETUP] to exit.

1. TV Aspect (Default: 16:9 Wide)

You can select the TV aspect ratio to match the formats of what you are playing back with the unit and your TV screen (4:3 standard or 16:9 widescreen TV).

Select the desired setting using [▲ / ▼], then press [ENTER/OK].



If you have a standard TV:
Select "4:3 Letter Box", so that black bars appear on the top and bottom of the TV screen when playing back a wide-screen picture. Select "4:3 Pan & Scan" for a full height picture with both sides trimmed when playing back wide-screen picture.

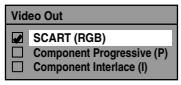
If you have a widescreen TV:
Select "16:9 Wide".

3. Video Out (Default: SCART (RGB))

This unit is compatible with the Progressive Scan System. The feature provides you with the higher definition images than the traditional output system does. You can enjoy Progressive Scan image by using HDMI OUT or COMPONENT VIDEO OUTPUT. To utilise the Progressive Scan system through the COMPONENT VIDEO OUTPUT, you must set Video Output mode in the Setup menu by following the steps on next page. "SCART (RGB)" is selected as the default.

• When you set the “Video Out” setting, make sure that the AV1(TV) Scart socket is connected to your TV with Scart cable.

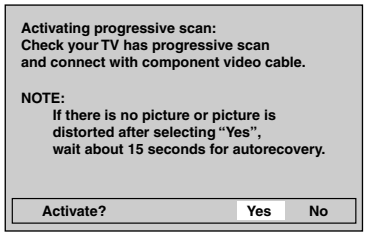
1 Select the desired setting using [▲ / ▼], then press [ENTER/OK].



- If your TV is compatible with progressive scanning (576p/480p), connect the TV to the COMPONENT VIDEO OUTPUT jacks of this unit and select “Component Progressive (P)” and set your TV to the progressive scan mode.
- If your TV is not compatible with progressive scan, select “Component Interlace (I)” for component connection, or select “SCART (RGB)” for Scart cable connection.
- Refer to page 21 for more details.

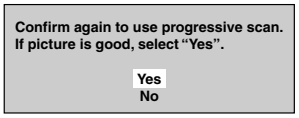
Only if you select the “Component Progressive (P)”, proceed to step 2. If you select “Component Interlace (I)” or “SCART (RGB)”, your setting is activated.

2 Using [◀ / ▶] to select “Yes”. Press [ENTER/OK].



Final confirmation window will appear.

3 Using [▲ / ▼] to select “Yes”. Press [ENTER/OK] within 15 seconds.



Your setting is activated.

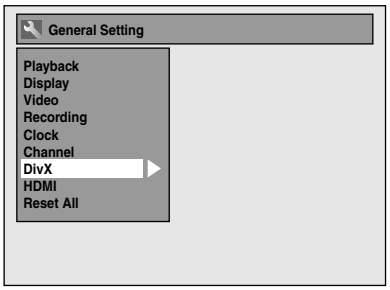
Note

- If the Progressive Scan image is distorted, you can cancel Progressive Scan by pressing and holding **[SETUP]** for more than 3 seconds during DVD playback. The “Video Out” setting will be “SCART (RGB)”.
- When changing the Video Out setting (“SCART (RGB)”, “Component Interlace (I)” or “Component Progressive (P)”), connect to the corresponding jack on the TV. If the setting is changed, for example, to “SCART (RGB)” while the COMPONENT VIDEO OUTPUT jacks are used to connect to the TV, a distorted video signal may be output.

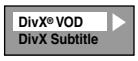
DivX®

1 In stop mode, press [SETUP]. Select “General Setting” using [▲ / ▼], then press [ENTER/OK].

2 Select “DivX” using [▲ / ▼], then press [ENTER/OK].



3 Select the desired item using [▲ / ▼], then press [ENTER/OK].



For “DivX® VOD”, refer to page 57 in details.

DivX Subtitle (Default: OFF)

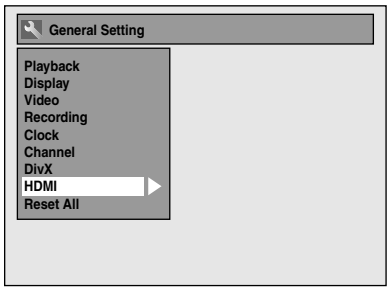
Select the desired setting using [▲ / ▼], then press [ENTER/OK].

4 When you finish with the setting, press [SETUP] to exit.

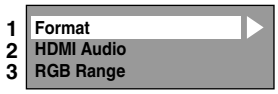
HDMI

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "HDMI" using [▲ / ▼], then press [ENTER/OK].



3 Select the desired item using [▲ / ▼], then press [ENTER/OK].



4 Refer to 1. to 3. on this page and set the selected item.

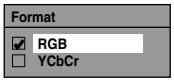
5 When you finish with the setting, press [SETUP] to exit.

1. Format (Default: RGB)

You can select the colour space for HDMI output. Set the appropriate colour space for your display device.

Select a setting using [▲ / ▼], then press [ENTER/OK].

- When the connected device is not compatible with the Y/Cb/Cr, HDMI signal is output as RGB regardless of the setting.



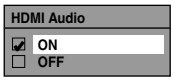
Your setting is activated.

2. HDMI Audio (Default: ON)

If you do not want to output the audio through HDMI (when you digitally output the audio through the AUDIO OUT (DIGITAL COAXIAL) jack to your audio system, etc.), you can set the HDMI audio output off.

Select a setting using [▲ / ▼], then press [ENTER/OK].

- Set to "OFF" when the HDMI sound is not outputted.



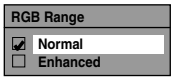
Your setting is activated.

3. RGB Range (Default: Normal)

You can adjust the RGB range to make the dark areas of the HDMI images brighter.

Select a setting using [▲ / ▼], then press [ENTER/OK].

- Select "Enhanced" if the black-white contrast is not clear.
- This setting is effective only for HDMI RGB output.

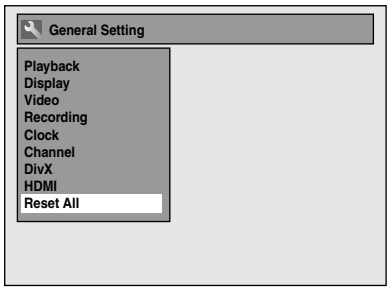


Your setting is activated.

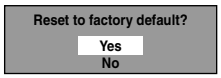
Reset All

1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER/OK].

2 Select "Reset All" using [▲ / ▼], then press [ENTER/OK].



3 Select "Yes" using [▲ / ▼], then press [ENTER/OK].



"Are you sure?" will appear. Select "Yes" using **[▲ / ▼]**, and then press **[ENTER/OK]**.

4 When you finish with the setting, press [SETUP] to exit.

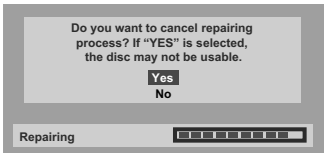
Note

- The settings listed below will remain unchanged even after resetting to the factory default.
  - Clock setting
  - Channel setting
  - Parental lock setting
  - DivX® VOD code
  - Timer Programmes

Others

Troubleshooting

Before requesting service for this unit, check the table below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

	Symptom	Remedy
POWER	The power does not turn on.	• Check that the AC power cord is connected securely. • Batteries of the remote control are weak.
	The unit turns on automatically without any operation.	• The unit turns on automatically 2 seconds before the timer recording.
GENERAL	The unit does not function.	• "⃠" or error message appears if the operation is prohibited. • Batteries of the remote control are weak or exhausted.
	No picture, sound or menu appears on the screen.	• Check if the connections are made securely and correctly. • Check if the cables are damaged. • Check if a correct external input channel is selected on your TV. (See page 23.) • Check if you have completed the channel setting. (See pages 24-28.)
	Clock setting and channel setting cannot be performed.	• If a recording is in progress, these operations cannot be performed.
	The unit does not operate properly.	• Moisture has condensed inside the unit. Remove the disc and leave the unit turned on for about 2 hours until the moisture evaporates. (See page 3.)
	"Repairing" appears on the TV screen. 	• If there is a power failure or unplugging during recording, finalising, formatting or editing (even after "Repairing" disappears), a repairing process will begin automatically just after turning the unit on again. • It may take several minutes up to about several hours.
	In a case you intend to cancel the repairing process. 	• If you intend to cancel the repairing process, press **[▲ OPEN/CLOSE]** on the front panel, then select "Yes" and press **[ENTER/OK]**. After that, press **[OPEN/CLOSE ▲]** to take out the disc. The disc cancelled during the repairing process MAY NOT work.
	The clock display does not appear in the front panel display.	• Check that the AC power cord is connected securely. • (In case of power failure) Check the breaker and clock setting.
	When you forget the password for parental lock.	• Please cancel the password and the set level. (See page 81.)
	DV signal cannot be input.	• Before connection, turn on the power supplies for both this unit and the DVC, and make sure that these units have stopped. • Only a "DVC-SD" signal can be input from the DVC to this unit. Other types of signals are not supported. • Do not connect any device other than the DVC. Even if a recorder or PC with another DV terminal is connected, the DV function will not operate. • If the DVC is not recognised after connection, turn off the power supply for the unit and re-connect the DVC.
	The DVC cannot be operated with this unit.	• Signal input or DVC operation from this unit may be disabled depending on the type of DVC. • If a DVC signal cannot be input, use an external input (AV2/AV3) for analogue connection via audio/video cables. Use Scart adaptor for connecting to AV2. • DVC control may be disabled depending on the type of DVC, even in a mode other than camera mode. In this case, switch to DVD control and execute the normal recording procedure while operating the DVC.

		Symptom	Remedy
GENERAL		Certain functions of the DVC cannot operate.	• Some functions may not operate depending on the type of DVC. For example, if the DVC does not support slow playback mode, the slow playback function is disabled. • With DV(AV4), the disc display menu does not appear unless disc playback is executed.
		DV audio signal cannot be switched.	• For recording with the DVC, the recording audio signal can be set to 12 bits or 16 bits. However, when 16-bit recording mode is selected, audio signal cannot be switched. To record an audio signal, set it to 12 bits.
		No image from HDMI connection.	• Check the HDMI connection. (Check the status of the HDMI related indications.) • Check whether the connected monitor device or other device supports HDCP. (This unit will not output a video signal unless the other device supports HDCP.) • Check the setting of HDMI. • Check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device.
CHANNEL		TV channels cannot be changed.	• Check if the connections are made securely and correctly. • Check if the cables are damaged. • Try channel setting by following the steps on pages 24-28.
		Only specific channels do not appear.	• The channels may be set to be skipped. (See page 26.)
		The external input channels (such as AV2 or AV3) cannot be skipped.	• This unit does not skip the external input channels. This is not a malfunction.
RECORDING	GENERAL	The image from the external device cannot be displayed or recorded.	• Try pressing **[INPUT SELECT ⇒]** repeatedly. • Turn on all connected devices. • Check if the connections are made securely and correctly.
	HDD / DVD	Recording is impossible.	• It is prohibited to make a recording from 2 minutes before the programmed start time of a timer recording. • This unit cannot record programs that contain copy protection signal. This is not a malfunction. • The space of the recording media may be used up. Try deleting unnecessary titles, or exchange it with the recordable media. • The maximum number of titles or chapters has exceeded. Delete the unnecessary titles to make enough space or insert a new recordable media. • Check if the connections are made securely and correctly.
		Timer recording cannot be performed.	• The internal clock of the unit may have been stopped due to a power failure that lasted for more than 30 seconds. Reset the clock. (See page 32.)
	DVD	Recording is impossible.	• Check if the disc is CPRM compatible. Copy-once programmes can only be copied onto the disc which is CPRM compatible. • Check if the disc is protected or finalised. Undo the protection or the finalisation. • DVD-RW once formatted on other unit cannot be recorded on this unit unless all the contents in the disc are erased. • Check if the connections are made securely and correctly.
		The indication " Writing to Disc 100% " does not disappear.	• " Writing to Disc 100% " may remain on screen for the maximum of 20 seconds even after it reached 100%. This is not a malfunction.
PLAYBACK	GENERAL	TV aspect ratio does not match your TV screen.	• Check the TV Aspect Ratio. (See page 84.) • A different aspect ratio will be used when the aspect ratio specified by the disc is not supported by this unit.
		Playback picture is distorted. Colour of the picture is abnormal.	• During fast forward or fast reverse, playback picture may be distorted. This is not a malfunction. • Connect to TV directly. When you connect this unit with the television via VCR or other devices, the picture may be distorted due to the copy-protection signal. • Check if the cables are damaged. • Keep the equipment which may cause electrical disturbances, such as a cellular phone, away.
		There is no sound, or no subtitle.	• Turn on all connected devices. • Check if the external input channel is set correctly. • Check if the connections are made securely and correctly. • If using the HDMI connection, sound is not output when "HDMI Audio" is set to "OFF". • Check the RCA audio cable connection. If you are using HDMI-DVI conversion cable, you must connect the RCA audio cable, too. • If using the HDMI connection, check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device.

		Symptom	Remedy
PLAYBACK	HDD/DVD	Playback does not start from the beginning.	• Resume function may be activated. Refer to page 61 to cancel the resume point.
	HDD	HDD playback suddenly stops.	• When DVD recording finishes during HDD playback, the unit will stop the HDD playback, and start writing data to the DVD. This is not a malfunction.
	DVD	Playback cannot be performed.	• Check if the playable disc is inserted. • Check if the disc is loaded correctly with the labelled side facing up. • Discs made on other devices or on personal computers cannot be played back on this unit unless it is finalised on the device. • Even if it is finalised, the performance of those discs are not guaranteed on this unit. • The disc may be dirty or flawed. Clean the disc. • Check if all the connections are made correctly. • Check the parental lock setting. (See page 81.) • Playback of DVD is prohibited from 2 minutes before the programmed start time of a timer recording when the recording media is DVD.
		There is no sound, or no subtitle.	• Check if the “Audio Out” is set correctly. (See pages 81-82.) • There is a possibility that the selected subtitle language is not supported by the disc.
		Digital audio setting cannot be changed to main audio (L), sub audio (R) or combination of both.	• If the audio source is in the Dolby Digital format, set the Dolby Digital Setting to “PCM” in “Playback” menu. (available only for DVD) (See page 82.)
		Audio language or the subtitle language of the DVD cannot be changed.	• Multilingual subtitles are not supported by the disc. • Some audio languages or the subtitle languages can be changed only from the disc menu. Please refer to the disc’s manual.
		Angles cannot be changed.	• Even though the multi-angle feature is supported by the disc, that does not mean all the scenes are shot from multi-angles. Changing angles are available only for those scenes shot from the multi-angle.
		The disc cannot be played back on other player even though it is finalised properly.	• Some DVD players do not play back the disc made on other recorder. Refer to the manual of the unit.
EDITING	HDD / DVD	Titles cannot be edited or deleted.	• The titles or the disc itself may be protected. Cancel the protection by following the steps on page 75 for title protection and page 53 for disc protection.
		Dubbing cannot be executed.	• When the number of the titles or the chapters exceeds the maximum recordable number, the dubbing will not be executed.
	DVD	Titles cannot be edited or deleted.	• The titles in the DVD+R/-R cannot be edited or deleted if they are finalised. If it is DVD-RW, undo the finalisation by following the steps on page 53.
		The capacity of the disc doesn’t increase even if the recorded program is deleted.	• With DVD+RW and video mode DVD-RW, the disc space will increase only when the last title in the original is deleted. With DVD-R/+R, deleting a title will not increase the disc space.
		Dubbing cannot be executed.	• Check if the disc is compatible for recording. (See page 33.)
REMOTE CONTROL		The remote control does not function.	• No batteries in the remote or the batteries may be weak. Replace the batteries. • Make sure there is no obstacle between the remote and the unit. • Try getting closer to the unit. (See page 14.) • If above solutions do not solve the problem, please call an Authorised Service Centre.

Error message	Cause	Solution
Disc Error — Please eject the disc. — Playback feature may not be available on this disc.	• An unplayable disc is inserted in the unit. • The disc is upside down.	• Insert a standard disc. (See page 9-10.) • Insert the disc with the labelled side facing up.
Region Error — Please eject the disc. — Playback is not authorized in your region.	• Playback is not authorised in the region of the DVD-Video that you inserted in the unit.	• Insert a DVD-Video with region codes 2 or ALL.
Parental Lock On The current selected parental level prohibits playback.	• The current selected parental level in the Setup menu prohibits playback.	• Check the “Parental Lock” setting. (See page 81.)
Recording Error This program is not allowed to be recorded.	• The recording function encountered a copy prohibited programme. • Original source is in NTSC system.	• You cannot record copy prohibited programmes.
Recording Error This program is not recordable in Video mode.	• You are trying to record a copy-once programme onto a DVD-RW disc in Video mode.	• Set “Format Mode” to “VR mode”. (See page 35.)
Recording Error Cannot record on this disc.	• You are trying to record onto a disc that is unrecordable, or the disc status does not satisfy recording requirements. • The disc is dirty. • The disc is damaged. • You are trying to record onto a VR mode DVD-RW disc which contained recordings from another recorder.	• Insert a recordable disc, and ensure the disc status satisfies the recording requirements. (See page 33.) • Clean the disc with a cleaning cloth. • Replace the disc. • Disc may need formatting.
Recording Error This program is not allowed to be recorded on this disc.	• You are trying to record a copy-once programme onto a DVD disc that is not compatible with CPRM.	• Insert a ver. 1.1 or ver. 1.2 DVD-RW disc (compatible with CPRM.)
Recording Error This disc is protected and not recordable.	• You are trying to record onto the DVD-RW, DVD+RW / +R disc that is set as protected in the Setup Menu.	• Remove the disc protect setting in the Disc menu. (See page 53.)
Recording Error Disc is full. (No area for new recording)	• You are trying to record onto the VR mode DVD-RW disc that has no space for recording.	• Insert a recordable disc with enough recording space. • Delete unnecessary original titles. (See page 71.)
Recording Error You cannot record more than 99 titles on one disc. (The maximum is 99)	• You are trying to record onto the DVD-RW / -R disc on which the number of recorded titles has reached the maximum (99).	• Delete unnecessary original titles. (See page 71.)
Recording Error You cannot record more than 999 chapters on one disc. (The maximum is 999)	• You are trying to record onto the VR mode DVD-RW disc on which the number of recorded chapters has reached the maximum (999).	• Delete unnecessary chapter marker from an Original list. (See page 73.)
Recording Error You cannot record more than 49 titles on one disc. (The maximum is 49)	• You are trying to record onto the DVD+RW/+R disc on which the number of recording titles comes up to the maximum (49).	• Delete unnecessary titles. (See page 71.)
Recording Error You cannot record more than 254 chapters on one disc. (The maximum is 254)	• You are trying to record onto the DVD+RW disc on which the number of recording chapters comes up to the maximum (254).	• Delete unnecessary chapter marks. (See page 73.)
Recording Error You cannot record on this disc as Control Information is full.	• This disc has no space to write Control Information when recording or deleting contents. • When editing has been repeatedly performed, the control information area may become full even though the recording area has enough space.	• Delete unnecessary original titles. (See page 71.)
Recording Error You cannot record on this disc as Power Calibration Area is full.	• When recordings are performed repeatedly onto an unstable disc, this area may become full. • Every time you insert a disc for recording, part of the disc’s working area will be used. • If you repeat this frequently, it will be used up quicker and you may not be able to record maximum number of titles for the disc.	• Insert a new disc.
Recording Error This disc is already finalised.	• You are trying to record onto a disc that is already finalised.	• Release the finalising for the disc. (See page 53.)

Error message	Cause	Solution
Recording Error The disc has no recording compatibility. Set “Make Recording Compatible” to “ON” to convert the disc.	• You are trying to record onto the unfinalised +VR mode discs recorded on other unit.	• Set “Make Recording Compatible” to “ON” to rewrite the menu, after that you will record to disc. (See page 35.)
Recording Error You cannot record more than 600 titles on HDD. (The maximum is 600).	• You are trying to record onto the HDD when total title number is already at its limit.	• Delete unnecessary titles. (See page 71.)
Recording Error Cannot record on this HDD.	• The internal HDD is dirty or damaged. • There is not enough space on the internal HDD.	• Contact the customer service centre. • Delete unnecessary titles. (See page 71.)

* If you are still having trouble with the unit after checking all the Troubleshooting points, write down the error code and the error description and consult your dealer or an authorised service centre.

Language Code

Language	Code	Language	Code	Language	Code	Language	Code
Abkhazian	4748	French	5264	Lithuanian	5866	Sindhi	6550
Afar	4747	Frisian	5271	Macedonian	5957	Singhalese	6555
Afrikaans	4752	Galician	5358	Malagasy	5953	Siswat	6565
Albanian	6563	Georgian	5747	Malay	5965	Slovak	6557
Amharic	4759	German	5051	Malayalam	5958	Slovenian	6558
Arabic	4764	Greek	5158	Maltese	5966	Somali	6561
Armenian	5471	Greenlandic	5758	Maori	5955	Spanish	5165
Assamese	4765	Guarani	5360	Marathi	5964	Sundanese	6567
Aymara	4771	Gujarati	5367	Moldavian	5961	Swahili	6569
Azerbaijani	4772	Hausa	5447	Mongolian	5960	Swedish	6568
Bashkir	4847	Hebrew	5569	Nauru	6047	Tagalog	6658
Basque	5167	Hindi	5455	Nepali	6051	Tajik	6653
Bengali;Bangla	4860	Hungarian	5467	Norwegian	6061	Tamil	6647
Bhutani	5072	Icelandic	5565	Occitan	6149	Tatar	6666
Bihari	4854	Indonesian	5560	Oriya	6164	Telugu	6651
Bislama	4855	Interlingua	5547	Oromo (Afan)	6159	Thai	6654
Breton	4864	Interlingue	5551	Panjabi	6247	Tibetan	4861
Bulgarian	4853	Inupiak	5557	Pashto; Pushto	6265	Tigrinya	6655
Burmese	5971	Irish	5347	Persian	5247	Tonga	6661
Byelorussian	4851	Italian	5566	Polish	6258	Tsonga	6665
Cambodian	5759	Japanese	5647	Portuguese	6266	Turkish	6664
Catalan	4947	Javanese	5669	Quechua	6367	Turkmen	6657
Chinese	7254	Kannada	5760	Rhaeto-Romance	6459	Twi	6669
Corsican	4961	Kashmiri	5765	Romanian	6461	Ukrainian	6757
Croatian	5464	Kazakh	5757	Russian	6467	Urdu	6764
Czech	4965	Kinyarwanda	6469	Samoan	6559	Uzbek	6772
Danish	5047	Kirghiz	5771	Sangho	6553	Vietnamese	6855
Dutch	6058	Kirundi	6460	Sanskrit	6547	Volapuk	6861
English	5160	Korean	5761	Scots Gaelic	5350	Welsh	4971
Esperanto	5161	Kurdish	5767	Serbian	6564	Wolof	6961
Estonian	5166	Laothian	5861	Serbo-Croatian	6554	Xhosa	7054
Faroese	5261	Latin	5847	Sesotho	6566	Yiddish	5655
Fiji	5256	Latvian; Lettish	5868	Setswana	6660	Yoruba	7161
Finnish	5255	Lingala	5860	Shona	6560	Zulu	7267

Glossary

Analogue audio

An electrical signal that directly represents sound. In contrast, digital audio can also be an electrical signal, but is an indirect representation of sound. See also Digital audio.

Aspect ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (i.e., the screen is almost square). Widescreen models are 16:9 (the screen is almost twice as wide as its height).

Chapter

Just as a book is split up into several chapters, a title on a DVD disc is usually divided into chapters. See also Title.

Component video output

Each signal of luminance(Y) and component (P_B/C_B, P_R/C_R) is independent to output so that you can experience picture colour as it is.
Also, due to compatibility with progressive video (576p/480p), you can experience higher-density picture than that in interlace (576i/480i).

CPRM (Content Protection for Recordable Media)

CPRM is a scrambling copy protection system for the protection of “copy-once” broadcast programmes (e.g. some satellite broadcasts).

Digital audio

An indirect representation of sound using numbers. During recording, the sound is measured at discrete intervals (44,100 times a second for CD audio) by an analogue-to-digital converter, generating a stream of numbers. On playback, a digital-to-analogue converter generates an analogue signal based on these numbers. See also Sampling frequency and Analogue audio.

Dolby Digital

A system developed by Dolby Laboratories that compresses digital sound. It works with stereo (2ch) or multi-channel audio.

DTS (Digital Theater System)

DTS is a multi channel surround sound system. By connecting to DTS decoder, you can enjoy dynamic and realistic sound like movie theatre. DTS surround sound technologies were developed by DTS, Inc.

Finalise

To make DVDs that have been recorded playable in DVD players. It is possible to finalise DVD-RW/-R and DVD+RW/+R discs with this unit.

HDMI (High Definition Multimedia Interface)

A digital interface between audio and video source. It can transmit component video, audio, and control signal with one cable connection.

JPEG (Joint Photographic Experts Group)

JPEG is a method of compressing still image files. You can copy JPEG files on CD-RW/-R discs from a computer and play back the files on this unit.

MP3 (MPEG Audio Layer 3)

MP3 is a method of compressing files. You can copy MP3 files on CD-RW/-R discs from a computer and play back the files on this unit.

PBC (Video CD only) (Playback Control)

This function enables you to play back interactive software using a menu screen. See also Title.

PCM (Pulse Code Modulation)

PCM is a format that converts audio into digital data. It is mainly used for Audio CDs and DAT. This unit can play back sounds as realistic as possible by converting even compressed Dolby Digital and MPEG audio to PCM.

Playlist

From this list, you can play back contents of a disc in your desired order or in sequence. It is also possible to directly search for a specific scene.

Progressive Scan (576p/480p)

A type of display that does not split each frame into fields, and instead scans directly through all the scanlines of each frame in order. Progressive Scan provides less flickering and higher image resolution than traditional (576i/480i) TV signals. Refer to pages 21 and 85 for instructions on the Progressive Scan mode selection.

Region code

Regions associate discs and players with particular areas of the world. This unit will only play back discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

Sampling frequency

The rate at which sound is measured by a specified interval to turn it into digital audio data. The number of samples in one second is defined as the sampling frequency. The higher the rate is, the better the possible sound quality.

Title

(DVD)
A collection of chapters on a DVD. See also chapter.
(Video CD)
The contents of a Video CD. When playing back a Video CD with the PBC function, the Title menu will appear automatically.

Track

Audio CDs and Video CDs use tracks to divide the contents of a disc. The DVD equivalent is called a chapter. See also Chapter.

Video mode

Video mode is the same recording format as used on the DVD-Videos you purchase in local shops. You can play back the discs recorded in this format in most DVD players, however it offers only limited editing. You will need to finalise discs recorded in Video mode before playing them back on other unit.

VR mode

A basic recording format for DVD-RW. VR mode offers advanced editing, and you can record and edit material repeatedly, however it is playable only on VR mode compatible unit. Finalisation is recommended before playing them back on other unit.

+VR mode

A recording format for DVD+RW/+R. +VR mode offers basic editing, and it is playable on most DVD players. Finalisation is recommended before playing them back on other unit.

Specifications

General	
System	HDD, DVD-Video, DVD-RW/-R, DVD+RW/+R, Video CD, CD-DA, CD-RW/-R
Power requirements	220–240 V~ ± 10%, 50 Hz ± 0.5%
Power consumption	37 W (standby: 7 W)
Weight	3.9 kg
Dimensions (width x height x depth)	420 x 59 x 315 mm
Operating temperature	5°C to 40°C
Operating humidity	Less than 80% (no condensation)
TV format	PAL-I
Recording	
Recording format	Video Recording (VR) format (DVD-RW only), Video format (DVD-RW, DVD-R) +VR format (DVD+RW, DVD+R)
Recordable discs	DVD-ReWritable, DVD-Recordable, DVD+ReWritable, DVD+Recordable
Video recording format	
Sampling frequency	13.5 MHz
Compression format	MPEG
Audio recording format	
Sampling frequency	48 kHz
Compression format	Dolby Digital
Tuner	
Receivable channels	IRA-E69 (For analogue channels) E21-E69 (For DVB-T channels)
Input/Output	
Front Panel : (AV3)	
Video input Input level	One RCA connector 1 Vp-p (75 Ω)
S-Video input Input level	One Mini DIN 4-pin jack Y (luminance) 1 Vp-p (75 Ω) C (colour) 300 mVp-p (75 Ω)
Audio input Input level	Two RCA connectors 2 Vrms (input impedance: more than 10 kΩ)
DV input DV 4-pin jack	IEEE 1394
Rear Panel :	
ANALOG VHF/UHF antenna input/output terminal DVB-T UHF antenna input/output terminal	75 Ω 75 Ω
Audio input /output	Two 21-pin scart sockets (AV1, AV2)
Video input /output Input /output level	Two 21-pin scart sockets (AV1, AV2) 1 Vp-p (75 Ω) each
Component video output Output level	Three RCA connectors Y: 1.0 Vp-p (75 Ω) P_B/C_B, P_R/C_R: 0.7 Vp-p (75 Ω) each
Audio output Output level	Two RCA connectors 2 Vrms (output impedance: 680 Ω)
Digital audio output Output level	One Coaxial pin jack 500 mVp-p (75 Ω)
HDMI output	HDMI jack

Note

The specifications and design of this product are subject to change without notice.

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